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What is the Secret of Successful Farming?

The Deer Creek Farmers' Club met at the residence of Mr. Wm. Webster, Saturday, October 23th, and discussed the question, propounded by Mr. Webster, "What is the secret of successful farming?" While it was well-known that many of the members of the club had found out the secret, judging from the appearance of their farms, &c., yet they could not explain it so that others might go and do likewise. To the *Aegis* we are indebted for a report of their views.

Mr. William Webster said he had not chosen the subject in order to tell the club how to farm successfully, but in the hope that the discussion might benefit himself as well as the club. There is a secret, as in all other occupations or professions. What it is he did not know. Within a distance of three miles there were several farmers who started without capital and now own their farms and are in comfortable circumstances. Others, equally as intelligent, industrious and with just as much brains, have in a measure failed. He concluded that industry was the first and most important element of success; not that a man should necessarily do manual labor, but he should diligently see to everything. Thorough cultivation and generous manuring are also essential to success. Farming is no haphazard work. It pays to give strict attention to the farm and crops and no man is a first-class farmer who don't enrich his land.

Dr. Webster said the first element of success was to have the land in excellent condition; supply artificially what is lacking in the soil; plow well, cultivate thoroughly and reap when the crops are ripe.

B. Silver, Jr., thought it necessary to success for a farmer to have brains and make a judicious use of them. Another important thing in farming is to make a judicious selection of hands. If by success you mean making money, that is what few farmers do.

Wm. F. Hays agreed with Mr. Silver that brains were necessary in farming as in other pursuits, and a man should make a proper use of them.

R. John Rogers said he would like to know the secret and if he did would tell it. He supposed that industry, good judgment and economy had a good deal to do with success in farming. Aim to live within your means and do the best you can, constitute the only secret he knows about successful farming.

Geo. J. Flinney apparently did not regard farming as a very successful pursuit any way. He never knew a man to get rich by it. If he confined his labors to the farm alone. In every case he had known where farmers had prospered they had means outside of their farms or were engaged in other business as well as farming.

Thos. A. Hays was anxious to know the secret and had nothing to impart. He believed the key-note is, attend to your own business.

D. E. Wilson was certain he had never found the secret. The men who were most

successful in farming were generally those who had the smallest families.

Edward P. Moores said his experience was too limited to enable him to find out the secret, but he agreed with Mr. Hays that it was highly important for a farmer to attend to his own business.

Thomas Lochary thought that to be successful a man should like his calling. That would lead to close attention to business, which is the chief secret of success in farming as well as in other pursuits.

S. M. Bayless said that to be successful in farming a man should be raised to the business. Good management is a great secret of success. A man should not employ more hands than he can manage properly.

R. Harris Archer's views coincided with those of Mr. Lochary. No one can succeed in any calling without a liking for it. If distasteful he will quit it as soon as possible. Close attention to business he regarded as the first element of success in farming. Brains are a good thing, also, but it requires in addition to brains a capacity for manual labor to be a successful farmer. A farmer must not only know how work ought to be done, but be able to do it himself and teach others how to do it. Mr. Archer thought another secret of success is for farmers to buy fertilizers and lumber for cash, even though they may have to borrow the money. They would get these articles a great deal cheaper than on a year's time. In buying a reaper, too, a farmer can save from 20 to 25 per cent. by paying cash for it. Most farmers have too much team to farm successfully.

S. M. Lee said there is no special talisman or plan to ensure success in farming. An adaptiveness to the profession or a determination to acquire it; a thorough practical training, in every detail of farming, as well as knowledge of the science of agriculture are necessary to success. The farmer's capacity, whether for a large or a small farm, must be found out, and the amount of capital necessary. If too small a farmer buys at great disadvantage. If too large, the interest will swallow up the profit. The capabilities of the farm must not be pushed beyond what the farm will bear. If your expenses are more than the farm can sustain you must have more land or live on the interest of the money you owe. One thing is necessary—all on the farm must be producers, to ensure success. Efficiency of labor is absolutely necessary. Farmers lose incalculably by awkward hands. One good hand is worth more than two untrained ones. Another secret of success is, don't spend money for artificial or imaginary wants.

James Lee regarded management as the great secret of success. He did not agree with some that it required so much manual labor of the farmer. On a large farm a man will make more by looking after his hands than by his own manual labor. On a poor small place a man must work himself to make it pay.

John Moores thought expenses should be

kept down to make farming successful. It is a question what success is. He would regard his friend Webster a success as a farmer, judging by the comforts by which he is surrounded. Farmers should keep an account of their expenses. Everybody else does. By looking over the account they may see where they can save. If a man is not a good manager he should educate himself up to it. The whole secret is in management. Farmers as a class live better than anybody else, and make as much money as any other people. A good plan to achieve success is to imitate those who are successful—not those who can tell us what to do and cannot do it themselves; but men who act.

Bennet H. Barnes thought the secret lay in the proper management of labor, in deep plowing, thorough cultivation and the use of good fertilizers. Labor, when not properly handled, is a sinking fund.

Richard Webster could not tell the secret, and thought that there is now little success about farming. At the present price of labor and fertilizers there is little profit at the end of the year.

John H. Janney said he could tell how a farmer could get rich, that is by spending less than he makes. Judicious economy is one secret of success, and farm management has a great deal to do with it. A farmer should adopt a good plan and adhere to it. There can be no success without it. Farmers, as a class, are more successful than people generally. Fewer farmers die and leave nothing behind them than merchants, professional men or mechanics.

Jas. H. Jacobs said that from what he had heard energy intelligently directed was as near the secret as he could get.

The President, Wm. Munnikhuyzen, said that from observation of the mode of farming and its results in Pennsylvania, he thought the want of success is from farming too much land. In Chester county the farms are small but all are farmed neatly and well. They do not raise as big crops as our farmers do, but they raise them at less expense and therefore to greater profit. They practice economy in everything, and particularly in labor. Their houses, as well as their barns, are supplied with labor-saving appliances of every kind, so that a farmer's wife there does not really have to work as hard as her Maryland sister does, with all her servants. He regarded industry and economy as the principal secrets of success in farming.

George E. Silver thought the term success needs definition. What one man would regard as success might fail to satisfy the ambition of another. In the first place a man should be thoroughly interested in his business; he should be well acquainted with it and have natural abilities leading him in that direction. He must have brains and muscle and be willing to apply them to his business. A farmer will not be successful, as a general thing, without the application of muscle. He did not mean that a farmer should go out and plow, but he ought to know when plowing is properly done. Then

he ought to be up in the morning in time to see it started and done right. Management has a great deal to do with success, and the larger the farm the more management is required. An honest, industrious and capable man can make a living and raise a family on 25 or 30 acres of land, while another, without the necessary qualifications, would be sold out in a year or two. The one depending on muscle would succeed, and the other, depending upon brains alone, would fail. There is a secret in farming, and it is a determination to succeed.

Mr. Archer remarked that Mr. Webster's place looks better at each succeeding visit of the club. He has a good herd of grade cattle and they look well.

Mr. Munnikhuyzen also mentioned several improvements Mr. Webster had made in his farm buildings.

Mr. Webster remarked that he had chosen the subject for discussion, after conversing with a neighbor who had been successful in farming, and who attributed his success to hard work and economy.

The club adjourned to meet at the residence of Mr. R. John Rogers' November 28. Subject for discussion: "Encouragement of Farm Implement Factories and Repair Shops at Home."

N. Y. Agricultural Experiment Station.

Bulletin No. XIII is the most interesting paper of any yet issued and is likely to attract general attention on account of the novel and unexpected results attendant on careful experiments in corn planting. We print the Bulletin entire.

N. Y. AGRICULTURAL EXPERIMENT STATION, GENEVA, N. Y., October 14, 1882.

BULLETIN NO. XIII.

The custom of rejecting the butt and tip kernels from the selection of seed corn is an almost universal practice among our more careful farmers who exercise concern about their seed. In an experiment designed to determine the influence of the butt and tip kernels used as seed, normal ears of Wau-shakum corn were taken, and planted kernel by kernel on two plats in eight rows, each kernel occupying in the row the relative position it occupied on the ear. One ear was thus diagrammed on unmanured soil, the other upon soil which received 400 pounds of Bowker's hill and drill phosphate per acre. These two plats were so situated that the butt kernels commenced upon the north and south end respectively, the kernels being planted towards the center, leaving a space of several yards between the tip kernel of each ear. The seed was planted May 31st, the drills 12 inches apart, the kernels one foot apart in the drill. It was supposed that under this method of planting any divergence of growth would become at once manifest to the eye, and change in time of bloom, or ripening, as between the product of each kernel if influenced by location of the kernel upon the cob, could be readily perceived and noted. We were able, however, to discern but little, if any, difference

during growth. In the kernels on the unmanured plat fewer of the butt and tip corns vegetated than from the ear planted on the manured plat, while upon both plats the vegetation of the central kernels was nearly perfect. Vegetation appeared June 10th uniformly over both plats, on July 25th the tassels showed uniformly over the plats, on July 29th marked as in bloom, and no perceptible difference as between the centers and ends of the rows. The corn was left standing until October 5th, when the Director and his assistants husked each plant, laying its own yield upon the ground alongside each plant, and made the following figures:—

| | Unmanured— | | | Manured— | | |
|--|------------|----------|------|----------|----------|------|
| | Butt. | Central. | Tip. | Butt. | Central. | Tip. |

Kernels planted. 40 340 40 40 340 40

Kernels vegetated. 17 333 38 39 358 40

Thus the germinative per cent. of the two ears was: 426 Kernels planted, 388 grew, or 91 per cent. for the ear on the unmanured soil; and 345 kernels planted, 335 grew, or 97 per cent. for the ear on the manured soil. Of the 80 butt kernels, 56 kernels or 70 per cent. germinated; of the 611 central kernels, 589 kernels, or 96 per cent. germinated; of the 80 tip kernels, 78 kernels, or 97.5 per cent. germinated. We may, however, conclude that in general on normal, well-selected ears, the tip and butt kernels are as likely to grow as are the central kernels, and furnish equally well appearing plants.

We next separated the merchantable and unmerchantable corn, and obtained the following figures:

| | UNMANURED. | | | MANURED. | | |
|--|------------|----------|------|----------|----------|------|
| | Butt. | Central. | Tip. | Butt. | Central. | Tip. |

Merchantable ears..... 19 214 46 44 274 47

Unmerchantable ears..... 10 80 8 11 36 5

Re-calculating the figures in this table so as to give the yield per plant, by estimating the missing kernels as equally productive with the grain-bearing plants, we have:

| | UNMANURED PLAT. | | | MANURED PLAT. | | |
|--|-----------------|----------|------|---------------|----------|------|
| | Butt. | Central. | Tip. | Butt. | Central. | Tip. |

Merchantable ears..... 44 253 48 45 291 47

Unmerchantable ears..... 23 99 8 11 37 5

Merchantable ears per 100 plants..... 110 78 190 112 107 117

Unmerchantable ears per 100 plants..... 57 26 20 27 14 12

Average length of merchantable ears..... 7.57 5.55 8.13 6.64 7.10 7.56

Av. wt. of merchantable ears per 100 plants..... 48.5 27.9 43.8 51.6 45.8 53.5

Av. wt. of 100 merchantable ears..... 48.1 38.0 38.5 45.8 48.7 45.5

Average of both plats:

| | SEED USED | | |
|--|-----------|----------|------|
| | Butt. | Central. | Tip. |

Merchantable ears per 100 plants..... 111 90 118

Unmerchantable ears per 100 plants..... 42 30 16

Total ears per 100 plants..... 155 110 134

Average length of merchantable ears..... 7.1 6.8 7.8

Av. wt. of merchantable ears per 100 plants..... 50.0 37.3 50.0

Av. wt. of 100 merchantable ears..... 44.6 40.9 42.0

The surprising as unexpected outcome of this experiment, hence, can be formulated as follows:

1. The tip kernels were the most prolific of good corn.

2. The butt kernels were more prolific of good corn than the central kernels.

3. The tip kernels bore longer ears than the other kernels, the butt kernels the next, and the central kernels the shortest. This fact was apparent to the sight as the corn lay upon the ground after husking.

4. The merchantable ears from the butt were distinctly heavier than those from the tip, and those from the tip distinctly heavier than those from the central kernels.

5. The butt kernels furnished more unmerchantable corn than did the central kernels, and the central kernels more than did the tip kernels.

In order to give more prominence to the meaning of these figures, we calculate the

yield per acre, allowing 75 pounds of ear corn to the bushel of shelled corn; a method of presenting results which is fallacious if assumed to mean real yield per acre, but convenient and allowable if understood to represent calculated results only.

The figures upon which the results are calculated are as follows:

Each plant occupies 504 square inches of space; an acre contains 6,272,640 square inches, therefore an acre would contain 12,445 plants.

| | Shelled corn |
|---|--------------|
| The 80 butt kernels yielded merchantable corn at rate of..... | 83 bush |
| The 611 central do do..... | 82 " |
| The 80 tip do do..... | 88 " |

Re-calculating for the manured and unmanured plats, we have:

| | Unmanured | Manured |
|--|-----------|---------|
| The butt kernels yielded merchantable corn at rate of..... | 79 bush. | 85 bush |
| The central do do..... | 46 " | 78 " |
| The tip do do..... | 77 " | 88 " |
| The total 426 do do..... | 65 " | 83 " |
| The total 345 do do..... | 65 " | 83 " |

We may be pardoned if we call attention to the conditions which serve to add trustworthiness to the conclusions which these figures suggest, always desiring it to be noted, however, that the experimental researches of one season must be followed by the test or verification in the succeeding season before they should be accepted as finalities.

1. The seed used was of the Waushakum variety, a kind of corn which has now been bred for a number of years with the utmost care, until at present there is a good uniformity of quality in the product of its seed under given conditions, and a strong race character which gives it considerable power to resist individual variation.

2. The seed used was all from one ear, thus in connection with the care that has been exercised for years past to guard against hybridization, ensuring a seed corn of as uniform a character as can at present be obtained.

3. Both plats showed a remarkable uniformity of appearance as between their several rows, thus indicating uniformity of character in the soil upon which the seed was planted.

4. There was no difference apparent in the maturity of the various plants.

5. The ears were husked by ourselves and each plant's product laid by itself upon the ground at the foot of the stalk which bore the crop, thus ensuring against mistake in the counting, measuring and weighing.

6. Three separate observers carefully went over each row and verified each other's conclusions, and thus absolute agreement in observations was secured on the spot.

As a matter of interest we present a table of the results for the eight rows, calculated to the 100 plants, in order that the variations under these favorable conditions of seed and soil may become prominent, and thus indicate in a measure the character of the seed and soil.

| Row. | Unmanured. | Manured. |
|---|------------|----------|
| 1. Yield of merchantable ear-corn per 100 plants..... | 41 | 46 |
| 2. do do..... | 35 | 43 |
| 3. do do..... | 35 | 45 |
| 4. do do..... | 36 | 43 |
| 5. do do..... | 40 | 42 |
| 6. do do..... | 28 | 41 |
| 7. do do..... | 38 | 41 |
| 8. do do..... | 41 | 45 |

If we should calculate these rows to the acre the result would be a variation of about 10 bushels of 75 pounds for the unmanured rows, and 11 bushels for the manured rows per calculated acre, or but 14½ and 13½ per cent.

As a corollary to this presentation it will be observed that the 400 pounds of fertilizer used added but at the rate of 15 bushels of merchantable crop, while the use of tip kernels added at the rate of 31 bushels to the unmanured, and 11 bushels to the manured crop. It will also be observed that the outer rows of each plat are superior to the inner rows, but that this superiority does not hold with the second rows.

E. LEWIS STURTEVANT, M. D., Director.

How Cotton Exhausts the Soil.

Dr. Charles W. Dabney, Jr., Director of the North Carolina Experiment Station in the Bulletin of the Department of Agriculture of that State, says:

Twenty years ago cotton was considered a most exhausting crop. This was a statement frequently made in the old time, in spite of the fact that it was always grown upon the poorest land on the farm. And so it was, when the cotton culture was managed in the old-time way. The "cotton patches" were always immediately around the house or barn, and, as soon as the cotton was picked, the whole herd of domestic animals was turned upon the convenient "patches," and allowed to make a clean sweep of all that remained of the cotton crop. The valve of the seed was not appreciated either in those days, and they were permitted to rot in heaps at the gin. As a matter of course, cotton, thus managed, was a very exhausting crop. In our own time we see occasionally the same thing. In some neighborhoods where the tenant system is in vogue the negro tenants sell their cotton seed to their wiser neighbors, who uses them to enrich his own land. The writer has in mind a strong case, in which a thriving merchant-farmer, at a small railway station in eastern North Carolina, has drained his neighbors' lands, of their fertility in the shape of cotton-seed bought of them year after year for the last fifteen years, until the contrast between their lands and his strikes the eye of every traveller, almost as strongly as would a garden and a desert, side by side.

It is a common thing now to hear the oil-mill men in the Southwest, whose mills have been longest established, complaining of the scarcity of cotton-seed, resulting from the impoverishment of the soil in the districts in which they were once plentiful. They have to seek seed in other quarters, or else move their mills. What is the explanation? The farmers do not fertilize their cotton fields systematically. They sell the oil-mill all of their seed and do not buy any cake or meal back, or put any fertilizer upon the soil in place of it.

The oil-mill seeks a foreign market for its cake, and sells it all to feed stock in England or at the North. The planter may reply to me, that he cannot afford under his circumstances to pay the oil-mill people their price for cotton-seed cake, or to buy the fertilizer to replace the seed. Then, most assuredly, my friend, you cannot afford to sell your cotton-seed. It will be far better for you to have your seed pressed and save the oil, and get the cake in a better condition for all of its uses. But if you cannot get the oil-mill to do this on favorable terms, then you must certainly keep your seed at home, as the best ingredient of home-made manures that the cotton planter has who cannot buy any fertilizing material.

The perfect, ideal plan, of course would be to use the oil-cake to feed stock, and then use the animal manure upon the cotton lands. But the Southern farmer is nothing of a stock-raiser at present. Until "mixed farming," with stock-raising as an element, is introduced in the South, we can utilize our cotton-seed cake to best advantage by mixing it with superphosphate and using it directly as a manure. I am aware of the complaint that the oil-mills have been too grasping in their demands, for a lion's share of the profits accruing from this business. But all the milling machinery has been so much improved of late that there cannot be any question but that terms can be made between the oil-mill and the planter which will make the pressing of the cotton-seed a great profit to both, and hence a great benefit to the country at large. Surely, where the question is the pressing of 35 gallons of oil, worth 40 cents, and 750 pounds of cake, worth \$25 per ton, from each ton of the

three million tons of cotton-seed produced in the South yearly, some equitable terms may be arrived at by which all parties will profit, and this great waste of resources be prevented! It is probable that the solution of the situation will be found in the direction already pointed out, viz.: the manufacture of the oil-cake into fertilizers at the mills, and the barter of the cotton-seed for this.

The greatest desideratum, of course, is the oil-mill of such a size as to be capable of being used upon the farm. There would be no question about the saving of the oil of the cotton-seed, I suppose, if a plantable oil-mill could be had on such a scale as not to cost too much for outlay or operation. They have the rough oil-strikers in every hamlet in Germany, where rape-seed or linseed are pressed. We hope before long to have something like it. Then, surely, competition will regulate this trade, like every other, and we shall see cotton-seed oil and the oil-cake quoted among farm products in the papers—a state of things "devoutly to be wished for."

Transition From Cotton to Mixed Farming.

Our Southern journals and city farmers scold the working farmers of the South a great deal about making mostly cotton and but little corn and pork, and what is said is all well enough so far as it goes. But who can tell the poor farmer, who is working on poor land, has no credit, no corn, no pork, no friends who can help him, how he can sustain himself the first year that he drops cotton and takes up corn, potatoes and pork? Here is where farmers want advice. Who can come to their aid? The farmer knows better than his well-fed advisers how much he stands in need of a full corn crib and plenty of potatoes and pork. He knows how he could yearly make an abundance of provisions for home use and forage for his stock, and some to sell, if he could but make his lands rich and get a start. On poor land it is as much as a farmer with one or two hogs can do to make a year's supply of corn, potatoes and peas, and make a spring and fall garden, without making any cotton at all. On rich land a man and two hogs can make the home supplies and from six to ten bales of cotton besides, and perhaps have corn, peas and potatoes to sell. Whoever will settle this transition question will give the farmer the key to future prosperity.

Capt. Put. Darden, Master of the Mississippi State Grange, P. of H., says that the farmers of Mississippi are yearly getting poorer and poorer on cotton, and liens, and mortgages, and for want of the true key to mixed farming they still cling to cotton.

The first step to be taken by farmers making the change from cotton to corn: they are on poor land, they must turn their attention intensely to fertilizers to grade up their lands, so that they will produce two, three or four times as much as they now do. The poor lands of the State all need vegetable matter. Peavines are the cheapest of vegetable fertilizers, but the first year the farmer cannot wait for peas to grow to give him his first crop of provisions. He must scrape up rotten leaves, rotten wood and rich mould from ravines, and decayed matter that can be found on the place; haul it on his poor lands and dump it down in cart loads to remain until plowing time; then spread it broadcast and plow and harrow thoroughly. Cut down useless saplings and waste timber of any kind; burn it a dry time and at once scatter the ashes on the poor spots. Like marl and lime, the ashes will make their mark on the crops for ten or fifteen years. A ton of dissolved bone, with three or four tons of ashes, well mixed, the whole moistened with water, will greatly increase the fertility of ten acres, and will insure a good crop of corn and peas the same year. Be-

perphosphate, mixed with well-rotted barnyard manure, is a speedy way to get a good crop from poor lands. Plant whippoorwill peas as early in the spring as frosts will permit and get two crops the same year. Sow from two to four bushels speckled or whippoorwill peas to the acre, and plow in the vines when they are in blossom. Then at once sow again, and plow in in October. Then sow winter rye, and plow it in. This is a quick and cheap way to enrich land or supply humus. The poor farmer must make his land rich as quickly as possible with such means and credit as he can command, he must have corn, potatoes, oats and peas to sell as soon as possible, and to fatten his hogs, and feed his mules and chickens beside. All this needs calculation, study, judgment, industry and close economy. If a farmer works hard, buys at the stores only the necessities of life, deals honestly with all men, and is a good citizen, and don't patronize the saloons, he can usually get a little credit to help him to get a start.

Farmers on rich lands can change from cotton to mixed crops at once, and have corn, peas, potatoes, and bacon, hay and oats to sell in place of cotton, and get more profits than from cotton. But it takes pluck and energy to get away from cotton, whether on poor lands or rich lands.

Official Report of the Cotton Crop of 1881-82, With Accompanying Statistics.

From the official report of the National Cotton Exchange the following statistics are taken respecting the crop movement for the crop year ended August 31, 1882. After four years of steady increase the production for the year 1881-82 shows a falling off of 1,149,702 bales, the total receipts being 5,458,048, against 6,605,750 for the year 1880-81. Of this amount there was exported 3,582,693 bales against 4,589,346 the year previous, while the home consumption comprised the amount taken by Northern mills, 1,677,581, against 1,713,626, together with 296,954 taken by Southern mills, against 225,311 the previous year, thus making the total home consumption 1,964,535 in 1881-82, against 1,938,937, during 1880-81, or an increase of 25,598. The increase has been wholly at the South, respecting which the report says:

"The increase in Southern consumption for the season just closed has been very large, aggregating 61,643 bales, or over 27 per cent. Many of the new mills being constructed at the date of our last statement have gone into operation, and the old mills have been running full time with very few exceptions. There are a large number of mills in course of construction that either have not figured at all in this year's returns, or to a very limited extent, that will go to swell the takings in the South for the year 1882-83. It is estimated that the new mills started since January 1, 1881, will run 360,000 spindles, and when all completed will consume 120,000 bales, as they will run mainly on coarse yarns. The spindles actually running the past season aggregated 840,000. According to the census of 1880 there were in the Southern States 583,696 spindles, showing an increase of over 45 per cent., and by September, 1883, the number will be over 1,000,000." The cotton production of 1881-82 was distributed as follows: Louisiana 1,190,708 bales, Texas 459,335, Alabama 265,040, Georgia 739,303, South Carolina 511,046, Virginia, 753,026, North Carolina 221,318, Tennessee 1,000,072, Sea Island 37,862; consumed in the South not included above 278,841. The average weight per bale was 474.28 lbs., against 484.40 lbs. last year.

The *Sun* urges that Baltimore offers the most promising city in which to hold the Great Cotton Exposition of 1884.

"Going West."

The rage for "going West" from the Middle and Southern states, is not as great as it was some 30 or 40 years ago, but still it is to be regretted that many of our young farmers, especially of the Western counties of Maryland, and those adjacent of Pennsylvania, continue to leave their native homes, for the Western States. This movement is still brisk in the Eastern States, and in an address at the late annual Fair of Vermont, made by Gov. J. G. Smith, of that State, the great error is pointed out even of the young men of his less favored agricultural region than that of the Middle States, leaving their paternal acres, in search of homes in the far off States, where innumerable trials and difficulties meet them on every hand, before they are firmly fixed in their new homes. Those who have plenty of funds to begin with may in the due course of time, accomplish their their object of increasing their wealth; but even such are compelled to meet with privations that would have been avoided at home, only to reach the height of their ambition of "getting rich," by finding at the end of their labors that others are to enjoy the fruits of their efforts.

We have for nearly a common life time been urging upon our farmers of Maryland and adjacent States the same advice that is present in the following extract from the speech of Gov. Smith:

There is great delusion in the idea of realizing sudden fortunes in the West. There are instances, it is true, of eminent success, and they are sent back painted in glowing colors; but we are kept in ignorance of the countless failures, and of the thousands who fall by the way, and die in the race after sudden fortunes. To young men eager to follow this road, I would say, resist the syren voice which whispers to you of golden prospects in the West; take the capital which you would invest in fitting your farms there and invest it here, and with the same energy, enterprise and patient waiting you will assuredly succeed, for in your native soil lies hidden as pure and precious gold as can be found in the Western prairies; dig for it here, and be assured that there is in store for you position, wealth and power."

"To you, farmers of Vermont, in whose hands the sacred trust is committed, more than to any others, of the welfare and prosperity of the Commonwealth, I appeal today, for more earnest effort and thoughtfulness, for deeper study, and a more intelligent application of the principles involved in agriculture. It is for you to elevate your pursuit to the position which it should occupy. Seek then by judicious, intelligent farming, to reclaim your land. Never were you supported by stronger aids than now. Science lends you her help; and unusual advantages present themselves, if you will but make use of them. The best talent of the public press is enlisted to stimulate and encourage your efforts; and a beneficent Providence is ever reminding you by genial sun and fertilizing showers, that he designed the earth for man's support, and blesses with the largest returns the most intelligent cultivation of the soil."

Spreading Manure Broadcast.

"Manure from the yard or stable," says Prof. S. W. Johnson, of Connecticut, "rarely contains such an amount of volatile fertilizing matter as should deter from spreading it broadcast on the surface when most convenient. Unless manure is very rich, as from grain-fed animals, and is in an active state of fermentation, hot and smoking and exhales a distinct smell of hartshorn, there can be no loss from exposure, and in any case the loss will be less by spreading over thinly than by dropping in small heaps, because spreading means cooling and loss of fermentation. But manure, when properly handled, need not suffer any waste from

evaporation. A moderate and regulated heating of fresh manure results in the formation of humic acid which secures the ammonia from loss by evaporation. This moderate heating it should have before hauling out or in cold weather, before it heats at all. The advantages of spreading manure from the wagon as it is drawn out are a saving of labor and an even distribution of the soluble salts, (ammonia, potash, phosphates, etc.) in the soil by rain. If the manure is heaped on the field and gets a heavy rain before spreading, the ground under the heaps receives an undue share of the best part of the manure. Independently, however, of loss by evaporation, there may be circumstances when it is best to get the manure into the ground before it has had a chance to become dry, for it distributes much better when moist and swollen with water than when 'chippy' or 'snuffy' in texture, and is ready at once to act as manure, whereas dry manure must recover moisture before it can be of any use."

Field Peas.

Messrs. Editors American Farmer:

To answer your correspondent's question in regard to the field peas I will say that they ought to be sowed about the last of May, drilling them at the rate of 1½ to 2 bushels to the acre. The drill covers them up and distributes them more regularly than hand sowing. As soon as the pea forms on the vine and the foliage is rank and heavy, take a *smoothing harrow* and run it before the plow the way you intend to plow the ground and you will find the vines as flat as a pancake. By back-furrowing or listing, the vines will be covered at the ends much better. Any good *chilled plow* will cover the foliage entirely. Then follow with the roller first to keep the roots underneath. The vines ought to be plowed under as soon as the pea forms so as to give them time to rot before seeding. Before seeding harrow across and then drill the wheat.

J. A. C.

Baltimore County, Md., Nov. 9, 1882.

Trespassing.

As this is the hunting season, when many farmers are annoyed by pot-hunters and other trespassers, the following extract, said to be from the charge of a judge in one of our Eastern-Shore counties, will give a view of the law of the subject:

"No man has a right to go upon the premises of another, whether for gunning or other purposes, without the consent of the owner, and every person so doing is a trespasser. Although it is customary for persons to enter upon the grounds of others for the purpose of fishing, nutting and gunning, yet they have no right to do it without the consent of the owner. Being a trespasser he must get off the premises, if directed, and must not stand upon his going. He must move off as he can, but he need not run. If he refuses to go the owner may use as much force as is necessary to put him off, even if it result in the death of the offender, but you dare not use more force than is absolutely necessary."

The Maryland State Grange

Will hold its Annual Session in the hall of the Young Men's Christian Association, corner of Charles and Saratoga streets, Baltimore, commencing on Tuesday, December 12, at 2.30 P.M. It is desirable that every grange in the State be represented at this meeting, as matters of importance are to be discussed and determined.

The State Grange is composed of Masters of Subordinate Granges and their wives who are Matrons. Past Masters and their wives who are Matrons shall be honorary members, and eligible to office, but not entitled to vote, unless sent as Delegates to represent their Grange in place of the Master and his wife.

Live Stock.

Easy Mode of Improving Cattle Stock.

An easy mode, and one reasonably inexpensive, at the same time, says the *National Live Stock Journal*, is what many farmers wait a good many years for, and to many it never comes. It fails to come, in their case, because of an excessively-cultivated cautiousness. It would seem, that after marketing scrub calves for a score of years or more, at less than half the price of well-bred ones, or furnishing grass and grain till they have reached an age to sell as third or fourth grade stock in market, any man of reasonably fair discernment would have made up his mind that this was not profitable.

To a farmer who has all his active life been a grower of grain, because he had no taste for stock-growing, and, inferentially, no faith in it, as a business, it is quite likely better for him not to attempt the avocation of a breeder, as his practices would not be in keeping with the needs of young, growing stock, neither of that more advanced, ready to be finished off. But we have a word to say to such as are fairly attentive to whatever they turn their hands to, and are willing to be guided by the signs of the times, indicated, in a measure, by articles published in recent numbers of *The Journal*, regarding the growing demand for meats. Nothing has occurred to weaken the arguments then used. On the other hand, the events of each day confirm them.

Turning off cattle younger than has heretofore been the custom, will materially curtail the supply, because the practice strikes at the fountain head, taking to market what, under former views, would be called immature stock. Those who furnish the cattle for slaughter at a year and a half to three years, will find that the public demand is insatiable, and annoyingly exacting as to quality. Scrubs will not fatten at the ages required, and it is quite generally dawning upon the minds of all observing farmers, that a scrub steer, at three years, has eaten all of value there is in him. He is not wanted then, is not salable, and is held and fed to maturity at a loss. At any rate, this will hold good upon any farm, worth, say, fifteen dollars an acre, and in a locality where corn, taking one year with another, is worth more than twenty cents a bushel, and hay brings a price corresponding with this.

Therefore, it is of vital importance to every farmer to get out of this rut, gradually, at least, discard the animals that have encumbered his acres, and replace them with such as meet the demands of the times, and command top prices from willing buyers. We read of a farmer, of very moderate means, who bought an in-calf heifer and a young bull at a moderate price for reputable purely bred stock. The price for the two may have been \$300; it may have been less than this. At any rate, by careful breeding for a period of ten years, he had twenty-eight descendants of the heifer upon the farm. Twelve of these were cows, four heifers, and ten heifer calves. One grown bull and one bull calf made up the full number. It is reasonable to infer, that he had at least made sales of quite a number of males. On such a basis as this, always having a purely bred bull for use upon common cows, no prudent man can do otherwise than better his condition by doing as this man did.

A comparison made between the grades upon this man's farm, and another where a scrub bull had been kept during a period of ten years, would, of course, show a very marked contrast. So great would this be, in the matter of general appearance, as well as furnishing a basis for profitable feeding, that the original investment, conceding it to have been three hundred dollars, would be found to have been entirely warranted, estimating the improvements wrought upon the com-

mon cattle upon the farm alone. The reader hardly need be reminded that the consumption of food would be about alike in the case of the grade and the scrub; the taxes would scarcely vary. Interest upon stock and farm, taxes upon the latter, and general wear and tear would be the same with one class as with the other, while the gain in early maturity, thus enabling the owner to turn his money quickly, added to the gain in growth from a given amount of feed, and the telling contrast between having the stock anxiously sought after, at six or seven cents a pound, and having to hunt unwilling buyers at half the figures given, should enable any man, not wilfully blinded, to readily see that an expenditure in the direction indicated cannot well be otherwise than profitable.

As will readily be seen, there is quite a difference between deferring the purchase of improved cattle to a future day, say ten years ahead, that you may then have a cash balance to your credit sufficient to enable you to buy a herd of fair dimensions at the start, and commencing as did the farmer referred to above, with a pair only, finding himself the possessor, at the end of ten years, of a herd of his own breeding, that, if bought at a single purchase, would cost several thousands. What is true of cattle in the direction named, is equally true of other farm stock. A beginning in this can, with entire propriety, be like the commencement in other lines of business. The pioneer, on a new timbered farm, does not wait a decade for trees to rot, but clears a small space, commencing in a small way. Some very large manufacturers commenced with a single forge or bench, at the cross-roads. They did not wait to accumulate a large surplus of capital, but planned to make a given line grow from a small beginning, be self-sustaining, eventually furnishing its own capital. If a man has not means to enable him to plant ten acres to potatoes, he can certainly plant a single eye of potatoe, and from this his ability to plant ten acres from crops of his own growing is only a question of time. So, the single cow system will, with reasonably discreet management, insure to the owner a respectable herd, without undue waiting. A cow bought for the boy of ten years, will, when the boy has attained his majority, furnish him a fair working capital to begin his business life with.

Cattle Feeding.

Most animals eat in proportion to their weight, under average conditions of age, temperature and fitness.

Give fattening cattle as much as they will eat and often—five times a day.

Never give rapid changes of food, but change often.

A good guide for a safe quantity of grain per day to maturing cattle is one pound to each hundred of their weight; thus an animal weighing one thousand pounds may receive ten pounds of grain.

Every stall feeding in the fall will make the winter's progress more certain by thirty per cent.

Give as much water and salt at all times as they will take.

In using roots, it is one guide to give just so much, in association with other things, so that the animal may not take any water.

In buildings have warmth with complete ventilation, without currents, but never under 40 nor over 70 degrees Fah.

A cold, damp, airy temperature will cause animals to consume more food without corresponding result in bone, muscle, flesh or fat, much being used to keep up warmth.

Stall feeding is better for fat making than box or yard management, irrespective of health.

The growing animal, intended for beef, requires a little exercise daily, to promote

muscle and strength of constitution, when ripe, only so much as to be able to walk to market.

Currying daily is equal to seven per cent. of the increase.

Don't forget that one animal's meat may be another animal's poison.

It takes three days of good food to make up for one of bad food.

The faster the fattening the more profit; less food, earlier returns and better flesh.

Get rid of every fattening cattle beast before it is three years old.

Every day an animal is kept, after being prime, there is loss, exclusive of manure.—*Western Live Stock Journal.*

Raising a Colt.

A colt is regarded as an incumbrance, because he is useless until he arrives at a suitable age for work, but it really costs very little, compared with his value, to raise a colt. When the period arrives at which the colt can do service, the balance sheet will show in his favor, for young horses always command good prices if they are sound and well broken. One of the difficulties in the way is the incumbrance placed on the dam, which interferes with her usefulness on the farm, especially if the colt is foaled during the early part of the spring. Some farmers have their colts foaled in the fall, but this is open to two objections. In the first place, spring is the natural time, for then the grass is beginning to grow, and nature seems to have provided the most animals should bring forth their young in a season beyond the reach of severe cold, and with sufficient time to grow and be prepared for the following winter.

Again, when a colt is foaled in the fall he must pass through a period of several months' confinement in the stable, without exercise, or else be more or less chilled with cold from time to time. Should this happen, the effect of any bad treatment will be afterward manifested, and no amount of attention can again elevate the colt to that degree of hardiness and soundness of body that naturally belong to a spring colt. Besides a colt foaled in the spring will outgrow one foaled in the fall. An objection to spring colts may be partially overcome by plowing in the fall, or keeping the brood mares for very light work, with the colts at liberty to accompany them always. A colt needs but very little feeding if the pasture is good, and there is water running through it. He needs then only a small feed of oats at night—no corn—and if he is given hay it is not necessary to give him a full ration. What he will consume from the barn will not be one-third his value when he is three years old, and if he is well bred the gain is greater.

When a farmer raises his horses he knows their disposition, constitution, and capacity. It is the proper way to get good, sound, serviceable horses on the farm. It should not be overlooked that a colt must be tenderly treated from birth, and must be fondled and handled as much as possible. He should never hear a harsh word, but should be taught to have confidence in everybody he sees or knows. This is an easy matter if his training begins from the time he is a day old. He can be thus gradually broken without difficulty, and will never be troublesome. No such thing as a whip should be allowed in a stable that contains a colt. Colts should not be worked until three years old, and then lightly at first, as they do not fully mature until they are six years old, and with some breeds of horses even later. Mares with foals at their side should be fed on the richest and most nourishing food.—*Western Farmer.*

THE Agricultural College of Mississippi has lately had its agent among the Galloway herds of Michigan looking for some breeding cattle.

Breaking Balking Horses.

To break an old, habitual, confirmed balker, is out of the question. If a horse balks nowhere else but on going up a hill, in nine cases out of ten the cause is to be found in a faulty collar or ill-fitting harness, or the load is too heavy for him. If Charley balks from "sheer cussedness," it matters not how much he is urged, or how emphatic you speak to him; and he will only look around and smile at you. Such a fellow is not only useless, but he is positively dangerous, where hills are such as render it necessary to ascend them in a walk; for he is not only satisfied with stopping, but will back the load, and is then as likely to land it in the ditch, or send it over a precipice, as to leave it on the road. The only security against this taking place is, if there is room, to at once turn him sideways to the hill, across the road, instead of urging him forward. Generally, after standing thus a few minutes, he will go on; at all events, it stops his running back. Where hills are moderate, that is, such as can be trotted up, a horse must be a very rank balker if he stops, unless the hill be very long and wearisome; in which case, before he does stop, turn him sideways, and give him a minute's breathing time. In such a country, with a little judicious management, such a horse may be tolerated, if he is a little false-collared. Pulling such a horse into a walk generally ends in his tossing his head about and then stopping. It is far better to stop him at once, before he stops himself. In driving a balking horse, an eye must be kept to the road; if new-laid gravel, or a soft place is seen ahead, rattle him over it, and then give him a pull up if it is thought wanting; for if he stops of his own accord in the middle of a heavy piece of road, he will never pull out of it. Without additional impetus over such a place, it is almost certain to cause a dead stop. Many of the best teams of horses that ever looked through a collar, if pulled into a walk on heavy ground, would not draw a pound, though they will take two tons through it in a trot; and the higher bred and the more spirited a horse is, the more likely he is to refuse what may be termed a dead pull; very few tempered ones would draw a barge on a canal. This does not arise from indolence or dislike to exertion, but from impatience of the pace requisite to move heavy weights. Many of the best and gamest-collared horses in the world, in trotting harness, would not start an empty cart, if the wheels stood in only a moderate water-drain or gutter. Of the hundred-and-one remedies suggested for balkiness, no one has proved generally successful. A remedy that would start a balking horse once, will be likely to prove anything but a success the next time. A permanent cure for balkiness is not known. A moderate or only occasionally balking horse is apt to become worse by idleness. Such an animal should be regularly used, but never for a dead pull. Light work and gentle handling are essential, and such a horse should never be hitched together with a young or flighty one, nor should he be worked singly, but always together with an old, steady and reliable horse, that will be sure to pull in spite of the lagging one. No severe bit should be used on such a horse; nor any whip or emphatic language, and care should be taken that the collar or harness fits snugly and comfortably, and that his head is not reined up high.—*Breeder's Gazette.*

Sheep Logic.

Mr. Henry Stewart remarks that we import wool and woolen goods to the value of \$50,000,000 yearly, or an equivalent to about 100,000,000 pounds of wool. There is certainly a little fear that the American farmers can go astray in keeping sheep, or in choosing whatever kind their circumstances or

their taste might make the most desirable. The successful result in wool-growing depends wholly upon the quality of the product, and this directly depends, at all times and under all circumstances, upon the health and condition of the sheep. This, is of course, in proportion to the carefulness and skill with which the flock is fed, sheltered and protected from accident and damage. It matters not, in this respect, what sheep are kept, if they are well kept; but it does matter if a farmer within one hundred miles of a market, where lamb and mutton are saleable at a good price, should make the mistake of keeping wholly for their fleece, or if the shepherd on the plains should attempt to keep a flock which requires the best of shelter and roots and high grain feeding, and will not yield a good fleece unless it is fed so light that its carcass is always ready for the butcher. The right sheep in the right place, and the right man and the right management, comprise the test which each one must elucidate, expound and practice for himself, as his tastes and circumstances may vary.

The Pig in Agriculture.

The pig has recently been spoken of in contempt when compared with our domestic animals. But if we examine his good qualities at all critically, we must award him a high place in agriculture. He is found to produce a pound of product from less food than either cattle or sheep, and is, therefore, the most economical machine to manufacture our great corn crop into marketable meat. Our people are becoming wiser every year, and exporting less, proportionately, of the raw material and more of condensed product. If it takes seven pounds of corn on the average to make a pound of pork, as is no doubt the case, the farmer begins to see the economy of exporting one pound of pork, bacon, or ham, instead of seven pounds of corn. The difference in cost of freight makes a fine profit of itself; besides, the pound of meat is usually worth more than seven pounds of corn in the foreign market. The production of pork should be encouraged, on the far her consideration that it carries off less of the valuable constituents of the soil than beef. The fat pig contains only three-fourths as much mineral matter per cwt. as the fat steer, and only two-fifths as much nitrogen per cwt.; and therefore the production of a ton of pork on the farm will carry off only a little more than half the fertility carried off by a ton of beef. Besides, a ton of beef will require nearly 50 per cent. more to produce it. This gives in round numbers the comparative effect of producing pork and beef. It is thus evident that the pig should have a high place in agriculture; should be fostered in every way; his capabilities studied and pushed; his diseases carefully noted and prevented, for he is the most profitable meat-producing animal on the farm. The pig is an excellent adjunct to the dairy, turning all refuse milk and even whey into cash. As he is king of our meat exports, so let us treat him with great consideration.—*Ex.*

Milk Fever.

Puerperal apoplexy, more familiarly known as puerperal, or milk fever, is, according to the *Live Stock Journal*, a very frequent and usually fatal disease among dairy stock. The losses which annually occur from the ravages of this malady is a great set-back to the enterprising young farmer whose means are somewhat limited, and who cannot afford to lose a valuable cow. It is therefore of the greatest importance to study this disease in its various phases, in order to be prepared to grapple with it in its incipient or primary stage, or what appears still more sensible, to take the necessary precautions to prevent, if possible, the frequency of those attacks. The usual victims of puer-

peral fever, or those which are most susceptible to the disease, are dairy cows in which the secretion of milk is abundant. High feeding, want of sufficient exercise, and neglect in proper ventilation and cleanliness, are the prolific causes; which facts are suggestive of the propriety of giving more than ordinary attention to the care and management of in-calf stock during the period of gestation, and especially at the time of approaching parturition. The period of life at which the disease is most likely to occur, is at the time of the birth of the third calf, and the season of the year when the disease is most prevalent is during the months of July, August, and September. Especially is this the case with cows which have been running all summer on luxuriant pasture. The sudden change in the system of the cow at the time when the blood is well charged with the elements of nutrition, from her dangerous plethoric condition, is more than nature can endure. The blood, which a short time before was directed to the womb, for the growth of the fetus *in utero*, is now directed to the udder, for the sustenance of the young-born calf; and if at this important time the skin and udder should perchance fail to perform their important functions, we should not be surprised if a determination of blood to the brain should be the result, and either congestion of its blood-vessel or rupture of their coats, causing extravasation of blood on the brain, thus producing coma and its fatal consequences. We now come to that part of the subject which is so important to all husbandmen, especially stock raisers. We refer to the best means of preventing the disease. We should first endeavor not to encourage the secretion of milk by feeding a rich, succulent diet. Cows which have been running on rich pasture, and are in full-fat condition, should be removed, three or four weeks before calving, to some barren pasture, and fed on dry food. This will have a tendency to diminish the secretion of milk at or about the time of calving, which is of great importance. If the change from wet to dry food has a tendency to constipate the bowels, a mild aperient may be given. In no case should the cow be milked before calving, unless it becomes an absolute necessity, as by premature milking the secretion of the mammary glands is unduly excited, and a more copious supply of milk encouraged, which should be carefully avoided. It is a well-known fact, that cows which calve with comparative ease, and clean promptly, are the usual victims. Cattle owners should therefore be very watchful of those particular subjects.

After the cow has calved, the flow of milk should be encouraged by frequent milking. If the cow is in full-fat condition, a cathartic should be administered, and nothing but a mild laxative diet should be fed. Care should also be taken not to expose her to any sudden change of temperature, or to any undue excitement, until all danger has passed by.

The treatment of a case of parturient apoplexy will very much depend on the stage of the disease in which the animal may be found. In the early, or primary stage, bleeding from the jugular vein is recommended. However, our chief aim should be to equalize the circulation, and use every means to divert the blood from the brain to some remote organs, by restoring the action of the skin, bowels, kidneys, mammary glands, etc. Ice may be applied to the head, if necessary; clothing may be used to restore the action of the skin. If the legs are cold, they should be rubbed with some stimulant and bandaged with red flannel. A cathartic should be administered as early as possible: 1 lb. of Epsom salts, with $\frac{1}{2}$ oz. each of gentian and ginger, dissolved in 1 pint of hot water, may be given at one dose;

and half the quantity may be repeated every four hours until the bowels are freely evacuated. The action of the cathartic may be promoted by the frequent administration of soap-suds injections. In extreme cases, turpentine enemata have an excellent effect. The flow of milk should be encouraged by frequent manipulations of the udder. Mustard blisters may also be applied along the whole course of the spine—say every four hours. Stimulants may be given as soon as practicable—brandy, whisky, and the carbonate of ammonia, in small and frequent doses, have a very desirable effect. It is also very necessary that the patient should be well nursed. A well-ventilated stall, with plenty of good bedding, is essential. It will be a good idea to bolster up the head to prevent her from injuring her horns, and at the same time facilitate the flow of blood from the brain.

Distemper in Horses.

Distemper says the *Farmer's Review* is an indefinite term used by horsemen generally for all diseases of catarrhal nature. The equine family when suffering from any disease of the respiratory organs, from a severe cold to an attack of the lungs is said to have the distemper. All horses are liable to have common catarrh, influenza, strangles, bronchitis, pneumonia, pleurisy, etc., etc., and the symptoms which accompany each of these diseases require very different treatment. Hence, to classify all these maladies under one head is not only wrong, but liable to lead to serious errors in treatment. That form of horse distemper known as "strangles" is of very common occurrence, especially among young horses, the treatment of which (unless it should become complicated) is very simple. This disease usually commences with the common appearance of mild catarrh or as popularly expressed of slight colds. The horse is somewhat dull, has often cough, some soreness of throat, a slight disinclination for food, but still more for water. The under part of the throat (in the intermaxillary space) swells, it is hot and tender, sometimes the swelling extends so as to include the whole space between the lower jaws, on the second or third day a discharge takes place from the nose of a muco-purulent character, in more severe cases a mucus secretion mixed with saliva flows from the mouth in large quantities. Treatment: Place the animal in a well-ventilated box stall, and apply a blister over the tumor, between the jaws; over which a poultice of flax-seed and bran may be constantly kept; when the tumor is sufficiently matured it should be freely lanced. It is a very good idea to steam the nose once or twice a day by allowing the patient to inhale the vapor from hot water and bran.

Preventing Diseases Among Hogs.

The causes of disease among swine, and the best remedies according to the *Drover's Journal* are unsolved problems in the estimation even of multitudes who have reared hogs for a quarter of a century. But a majority of our people will continue to try experiments. Nearly every man of large experience in fattening this class of stock, who has not a favorite medicine of his own, will try every remedy proposed by any man professing to be a veterinary surgeon. This is not surprising when we read in many of our papers that during 1878 twenty-five per cent. of the hog crop of that year was lost by hog cholera. So far as we can learn by careful inquiry, there is at present but little of this disease prevailing. Will the readers, therefore, allow us to give all who either rear or fatten swine a little simple advice? It may not do them or their animals much good, but it will do them no harm, and it may be of great value to their young stock.

At all events, the trial will not be expensive. As a postulate, we affirm the trite old aphorism. "An ounce of prevention is better than a pound of cure." Keep your hogs in good, clean fields; give them access to pure water, even though you should be compelled to dig a deep well for that purpose—a good pump and plenty of suitable troughs, cleansed every week, will cost but little, and will always prove a valuable outlay. Provide, also in the driest part of the field, a good shelter, both from sun and rain. A few rails properly arranged, two or three feet from the ground, covered with a stack of straw or coarse prairie grass, will be an attractive place for the entire drove. In troughs, near by their resting place a composition of salt, soda, red pepper and ginger. To four parts of the first two articles, add one part of the latter. Our common red pepper will do very well; they should, however, be well pulverized, and all the ingredients thoroughly mixed. Most healthy animals will readily devour salt. To obtain it they will also take the alkali and stimulant. The compound will not injure bird, beast, fish or man. It is not offered as a patent remedy, but simply as a preventive of the injurious effects of the foul gases and the pestiferous filth in which hogs have been allowed to wallow. Continue their usual summer feed, whether clover, bran, meal or corn.

Giving Medicines to Animals.

Prof. D. D. Slade, in the *Agriculturist* says: In giving a drench to a horse, a horn should be used in preference to a bottle, for fear of breakage. Standing at the right shoulder, raise the head with the left hand under the jaw, and with the right hand pass the lip of the horn into the side of the mouth, and empty its contents, the head being kept up until they are swallowed. If the animal is violent, place a twitch upon the nose, to be held by an assistant; or if he refuses to open the mouth, the tongue may be gently held to one side, the horn introduced, quickly emptied, and the tongue liberated at once. Under all circumstances, the greatest gentleness must be exercised. Nothing can be gained by impatience or by harsh treatment.

For the ox or cow, liquid medicine is preferable, given from the bottle rather than the horn. The bottle is more manageable, and one is less tempted to use it to pry open the jaws and perhaps thus lacerate the tongue also. Elevate the head only enough to prevent the liquid running from the mouth. The bottle should not be pushed back far into the throat. The tongue should be left free. The following is a very neat and efficacious method:—If standing, place the left side of the animal against a wall, and standing on the right side seize hold of the upper jaw by passing the left arm over the head, and bending the latter far round to the right, slightly elevating it. With the right hand, pour the contents of the bottle into the mouth at its angle using the least possible force.

Veterinary.

COLIC.—The following article from the *Live Stock Record*, will be a matter of information and benefit to many turfmen who lose valuable horses through colic:

Colic in horses is often brought on by feeding hay passed through corn stalk cutters, mixed with meal, middlings or bran, then wet up. The horse eats this food thus prepared so rapidly that it is not properly masticated, and consequently, becomes so clogged in the stomach as to cause indigestion followed by colic; more especially if directly after eating he is allowed to drink heartily of water, and the colder this is, so much more it is liable to bring on colic. The best way, when a horse is brought into the stable, is to let him stand a short time, particularly if sweating, then give him three or four

quarts of water, not over cold; then some uncut hay; after this a feed of grain or meal; and half an hour or so after this is eaten, all the water he pleases to drink. Some horses will eat cut hay with impunity, others cannot, or at least not till they have first eaten some uncut.

RHEUMATISM.—When a horse falls lame at uncertain and irregular intervals, and suddenly recovers and as suddenly falls lame again, it indicates that the cause is rheumatism which is a form of inflammation arising from a disordered and usually acid state of the blood, and attacks the fibrous structures, the muscles and tendons of the body. It is frequently constitutional and hereditary, and shifts from place to place without warning and very suddenly, and it may as rapidly disappear by warmth, the heat of the sun, or a change of weather, rainy, warm weather being favorable. Indigestion will cause it to appear, or a cold, or even exposure to a slight change of temperature. The most effective remedy is alkaline salts, as acetate of potassa or hyposulphate of soda, given in one ounce doses and continued for a week or two. Local applications of hot fomentations to the limb affected or of stimulating liniment will be useful. No corn should be given, and soft mashes of bran or oats and linseed should form the bulk of the food.

Items from Breeders' Gazette.

LOSS OF THE CUD.—The so-called loss of the cud in cattle or other ruminating animals, is not in itself a disease, but is one of the symptoms of disease of some kind. In most internal diseases of ruminants, the digestive organs become more or less involved, whereby the natural act of regurgitation and remastication (more commonly known as "chewing the cud"), becomes temporarily suspended. From this is derived the appellation of "loss of the cud." Treatment must necessarily vary with the nature of the disease, which, in a given case, produces this symptom of impaired digestive functions. The treating or attempting to treat one of the symptoms of a disease, which may be remote from the digestive organs, would, of course, lead to nothing but loss of time and risk of the life of the animal.

SO-CALLED THUMPS IN SWINE.—Thumps is a name which we have seen applied to a variety of diseases in swine. Thus, we have found, on opening pigs that were said to have died from "the thumps," that they died from pneumonia; in other cases we have found the term applied to quinsy, congestion of the lungs, and, in fact to almost any form of disease in which the act of breathing is much accelerated. To use this term in the supposition that the ailment is similar to what is called thumps in the horse, is wrong. In swine, the disease or diseases to which the term is applied, generally proves fatal, whereas this is not the case in the horse. We are frequently asked to explain the causes of thumps in swine and to prescribe remedies for the same; but when neither the cause nor the disease in all cases are the same, it is impossible to give a proper reply.

DIARRHŒA IN CALVES.—In the treatment of diarrhœa in young calves, it is best always begin with a laxative. Give, according to age, from two to three ounces of castor oil. After four or six hours, give a mixture of two drachms of compound chalk-powder with opium, and one drachm of powdered gentian, one ounce of peppermint water, and three ounces of starch emulsion. This dose may be given twice or thrice daily, according to the severity of the case. It is best to let such a calf suck the mother; if this, for any reason, cannot be done, then the rations of the calf should be small, but frequent; and instead of milk alone, it is best to give equal parts of fresh milk and flaxseed tea, in a blood warm, never in a cold state. The admixture of flaxseed tea will prevent the milk from curdling in the calf's stomach, upon which depends the scouring.

The Dairy.**The Quality of Butter.**

The progress that has been made in the improvement of butter in this country is most gratifying, and is the result of several distinct causes. In the first place, dairymen are progressive and intelligent to a very large degree. They seek knowledge and they gain it. They are open to conviction, and among professional dairymen there is little of the common stubborn prejudice which prevents a man from seeing that he is in error, if he is. That in one cause of the improvement of butter. In the next place those journals which are in any way interested in the dairy have been doing all that was within their power to drive poor butter out of the market. They have not only been prompt in furnishing all that was destructive, but they have lampooned—figuratively speaking—the careless butter-makers until many of them have been forced to adopt better methods. Then the oleomargarine swindle has been productive of some good, and in the midst of the harm it has done we are glad to be able to say that it has unintentionally done some little good. While it has stood by the side of our best butters and dishonestly robbed our dairymen of the fruits of their labor and skill, lessening the consumption of good butter, under false pretences, it has proved an unconquerable enemy to bad butter. Consumers who are all palate and stomach, and have not intelligence enough to enquire into the character of what they eat, bought oleomargarine in preference to poor butter, because it tasted better. They were foolish to do it, but they did it, and poor butter had a slim show in consequence. This has resulted in causing the standard of many dairies to be greatly raised. It was found to be very unprofitable to make and market butter that would be passed by for a dirty compound like oleomargarine, and consequently the quality of butter from many a dairy was improved.

But we are far from universal perfection yet, and we shall never get anywhere near that desirable condition until we all learn that good winter butter must come from good winter food. We must learn that dry hay will not make "June butter." But if we can supply June conditions, we shall have June butter at Christmas. If we cannot do this absolutely, we must approach to it as nearly as possible. Here the ensilage system presents itself for consideration. What the real merits of the system are we are not prepared to say. We have no doubt that ensilage crops will bare a very beneficial result upon dairy products. We cannot very well doubt that. But there are other considerations that enter into the question, such as expense, and naturally following this, whether similar results cannot be achieved by cheaper methods. We are inclined to think they can, but give it only as an opinion. We do not see the advisability at present of neglecting the root crop for the silo. Good hay, a generous supply of grain and plenty of roots will make good butter and plenty of it, and the roots, which to a large extent supply the grass, are in this western country pretty nearly as cheap as dirt. They can be grown in immense quantities to the acre and with but little trouble. Among the most valuable of these for feeding to dairy animals will be found the sugar beet, although but comparatively few have appeared to learn it. They do not produce so heavily as mangolds or turnips, but they are far more valuable. We speak of the sugar beet and not the common beet, remember. Even turnips are far better than nothing, and if judiciously fed will not injure dairy products. But we recommend the sugar beet.—[Western Rural.]

The American Dairymen's Association's next annual convention will be held in Geneva, N. Y., January, 1893.

Poultry Yard.**Poultry Keeping for Women.**

A lady correspondent having asked, if in his opinion, poultry keeping can be managed with profit by women, the Editor of the *Farmer's Advocate* says: Of this we are certain, that if many poor, struggling women, instead of working themselves almost to death at sewing and similar occupations, were to devote the same amount of energy to poultry keeping, they would find it at least as profitable, and certainly a more healthy and pleasanter occupation. A few months ago there went the round of the various journals a description of a widow who had been left to fight the battle of life with a family of little children, and who, to the consternation of her friends, rented a small house, together with a few acres of land, and invested her all (some \$200 and \$300) in poultry. The first year she not only was able to maintain herself and children, but was able to greatly increase her stock. In the course of a few years she was able to purchase the house and land, and this all from chicken raising. Many instances could be cited of the profits to be derived from poultry raising, and one case in particular that is actually known to the writer, of an elderly widow who is able to provide herself with all the necessities of life by keeping a few chickens. If a woman intends making a living by poultry keeping, and either owns or can rent a cottage and a small lot of ground for the purpose, she must make up her mind that it is business, not play, and she must devote her time to it same as any other occupation. If there is a barn or other building, so much the better; this can be easily cleaned and fitted up in a suitable and simple manner to receive her stock, otherwise she would have to build a hen house. As her trade increases, so can she increase her buildings; it is of no use over crowding herself until she gains experience. Suppose she buys two hundred young chickens and twenty roosters for a start, she will find that number plenty; these she ought to be able to purchase for twenty-five cents each for the hens; the roosters may cost a little more, but by all means get good, large, young roosters, because, even if the hens are common, the roosters will improve the breed. By going to some breeder of fancy poultry she will be able to obtain the cullings from his roosters at a reasonable price, and although they may not be up to exhibition mark, are still good enough to improve the breed of common hens. Of course, if able to get a few well-bred hens by the same means, decidedly do so, and the eggs from these birds can be used for breeding. With reasonable luck 200 hens should lay about ten dozen per day; these, at the very low figure of ten cents per dozen will be seven dollars per week; but eggs are not always so very low in price as ten cents, and when they are they should be stored in the cellar or some cool place for a few days till the market goes up. With the increasing demand in our cities, eggs will now almost sure to bring a good price, fifteen cents at least, that can be taken as the average price all the year round. For feed, taken all through, corn is the best; this can be purchased from the farmer in the cob for about sixty cents per bushel, and, after shelling, if the cobs are taken care of and put in a heap in some dry place, make excellent fuel for summer. Half a bushel of corn a day, with what they can pick up in the field, will be sufficient for that number of fowls; it should be judiciously fed so that all shall get their share. It is too much the rule to over feed poultry; the consequence is that they get lazy and hang around the building all day long; they should be made to work for their living, and by not feeding early in the day—making them find

their own breakfast, feeding them a little before noon and again shortly before roosting time, the birds will not only be healthier, but will lay much better. Give them plenty of water to drink. Never feed them round the house door, else they will be always skulking round the door looking for tit-bits; save the scraps and feed them to the young chickens. Some of the hens soon will want to set. One part of the building (the darkest) should be specially set apart for this purpose, and the nests so arranged that the birds will not disturb each other; don't set more eggs under each hen than they can possibly cover, and, as the different clutches come out, put the hen and chicks in a coop in some retired part of the run, where they are not likely to be interfered with by the roosters or spiteful hens. If a part of the run can be set apart for this purpose, so much the better. Feed the chicks upon crumbled bread, just sufficiently damped to make it crumble nicely; see that they have a constant supply of clean water placed in such a manner that they can only drink and not wet themselves. Fasten the coops up till the dew is off the grass in the mornings. After they are a month or six weeks old they will thrive better if allowed to roam with the old hen. These chickens will be ready to fatten in ten or twelve weeks time. Eight to ten days is plenty long enough time in which to fatten chickens. Fasten them up in long, narrow boxes with lath front, and a shallow trough running along outside the front. For fattening feed oatmeal is the best, should be damped and given to them four times a day, just sufficient for them to clean up the trough. If fed for more than the time mentioned they will go back in condition. So profitable is fattening chickens that we know of one establishment where many hundreds are fattened each week. The person whose business it is purchases lean birds and fattens them up for market, keeping half a dozen women to attend to the affair. It is scarcely necessary to tell a woman that in this, as well as any other business, cleanliness is indispensable. Don't spare the lime wash. Dry ashes or earth should be put under the perches, etc., which will make it easier to clean out the house, and the manure thus made will be very valuable and will sell for a high figure. If more hens want to sit than is wanted for that purpose, kill and market them directly they cease laying; don't bother feeding them till they lay again. If a woman goes into poultry raising, it is like any other business, the more it is pushed the better it will pay. The egg merchant in the city should be communicated with and arrangement made for his teams to call regularly for the eggs, and suitable packages to pack the eggs away in, or if too far distant, look out for the egg peddler calling at the store and trade with him; this will save the middle man's profit and give it to you. And if in the vicinity of a market, go regularly to market with the dead chickens, and establish a run of customers for yourself. If nothing but good poultry is sold, there will always be plenty of customers who will purchase at your own price. In winter, if the hen-house is kept warm, and the birds fed on warm food mixed with a little red pepper, and occasionally a feed of bullock's liver chopped small, a constant supply of eggs can be kept up, which, if not as numerous as in summer, the better price will equalize the profit. Never keep a hen longer than two or a rooster longer than three years. Keep improving your breed, but don't be tempted into fancy breeding; leave that to persons who can better afford it.

The old hens are generally now moulting. For two or three months during this process we can get few or no eggs from these birds. Keep them separate from the cocks and precocious cockerels until their new plumage is well out.

The Apiary.**Facts for Beginners in Bee Keeping.**

1. That the life of a worker bee, during the working season, is only from six to eight weeks' duration, and that a large majority of them never live to see seven weeks.
2. That a worker is from five to six days old before it comes out of the hive for the first time to take an airing, and that it is from fourteen to sixteen days old before it begins to gather either pollen or honey.
3. That all swarms engaged in building comb, when they have not a fertile queen, build only drone comb, and that all the comb, in the lower or breeding apartment should be worker or brood comb, four inches square being amply sufficient.
4. That the more prolific the queen is the more young bees you have, and the more surplus honey will be gathered, other things being equal.
5. That you ought never to cut moldy combs out of the hives, for the reason that you should never allow it to become moldy.
6. That you ought never to double swarms or stocks of bees in the fall, because you ought to attend to that and make them strong during the summer by taking the brood from the strong stocks and giving it to the weaker.
7. That a drone laying queen should be taken away and one producing workers be put in her place, else the colony will soon come to naught.
8. That as a rule, as soon as an Italian queen shows signs of old age or feebleness, the bees themselves will supersede her.
9. That all colonies should be kept strong in order to be successful.
10. That every hive should contain about two thousand cubic inches in the breeding department.
11. The beginners in bee keeping should be very cautious about increasing the number of their swarms or stock rapidly until they thoroughly understand the business.
12. That the hive itself, if well constructed, is all the bee house you need.—*Beekeepers' Review.*

Horticulture.**Grape Culture Under Glass.**

A paper read by JOHN EGAN before the New York Horticultural Society.

In my opinion there is no subject in horticulture which has been more thoroughly ventilated than that of grape culture. The most eminent horticulturists, both in Europe and America, gave it profound attention. Therefore, it seems to me that I have accepted a very difficult task in trying to make interesting so well worn a subject. To try to give the full routine of culture, would make this article too prosy, therefore I will confine myself to its most important point, and will begin with the proper structures for this purpose.

The forcing house wherein grapes are intended to be grown for the table in April or May should be a lean-to, of whatever length required, twelve to fourteen feet high, and of proportionate width, and set to a due south aspect. For later crops the house may be a double span, running north and south. The retarding house should face the west. As to heating by hot water, it is, I think, unnecessary to say much, being brought to very great perfection. Some persons are and have been advocating the use of steam for heating hothouses. From my own observation, where steam was used for the above purpose, the operator was very often in very hot water.

Beds and Borders.—For the earliest house there should not be any outside borders. The border inside ought to be raised as for rose beds, but of greater depth, say about twenty inches, with hot water pipes beneath, and of course the drainage must be of the most per-

fect kind. The soil should be thus composed: One-half strong brown loam, one-fourth light sandy earth, an eighth part of leaf mould, an eighth part decayed cow manure; a moderate quantity of ground bone may be added, or old lime rubbish will be better, as the bone is apt to generate a species of grub which may be injurious. This bed or border is under full control, and the vines can be rested sooner than if their roots extended outside the graper; consequently we can obtain much earlier fruit. Many know with what difficulty their vines are induced to start with their roots in a cold base; this and the practice of pruning before the foliage has entirely fallen, are the causes of this difficulty, and valuable time and fuel lost thereby. For second early crops this kind of border will not be necessary, and those as at present in use are without doubt as good as may be. The object in having a border outside the house was, that when the roots had filled the inside one they would find their way outside. But in most of the houses I have had in charge, I found hardly any inside the house; they had nearly all found their way to the outside. The proper place to plant, in my opinion, is at the centre of the house, and as they progress in growth, to lay down or bury three feet of the cane annually; in two years they will appear as if planted originally at the foot of the rafters. There will be no loss of fruit by this mode, as some apprehend, as the layering will not be performed until after the vines are pruned in December. Mulching the inside and keeping it so for a year or two will encourage the root. There is objection to borders outside the house, as they are exposed to heavy rains, and being generally very rich, retain a moisture a great length of time, and so injury to roots is apt to occur, and this may happen just as the grapes begin to color, and shanking and shriveling of the fruit often follow. There ought to be some protection used in these cases, so as to throw off superabundant moisture.

Ventilation.—Most of the grape houses erected of late years have not sufficient ventilation, the old style of houses being far better off in this respect, especially where early fruit is not desired, and also when the fruit is to be kept on the vine for daily use. The varying shade cast by the deep rafters and woodwork kept both foliage and fruit in better condition than by the modern fixed roof style of house.

Temperature.—About 50° Fahrenheit is enough to begin with at night in the first stage of forcing, and it should not pass 50° morning and night, till all the buds have sprung. This is a point of very great importance in the forcing of grapes. If the forcing be commenced with a dash, as some fast young grape growers term it, and a high temperature be kept up from the beginning, the chance is that not more than one half of the spurs will start. It is best to imitate nature as near as possible in all horticultural operations, and the further we deviate from her laws the quicker will retribution come. After the buds are well started, the heat must be gradually raised to 60°, 65° and 70°, to remain at that till the bloom opens. This rise from 50° to 70° cannot be effected in less time than two weeks. As the bloom opens the vines should be jarred or shaken in the morning to help impregnation, and the Muscats should have a portion, say an inch or so, of the extremity of the bunches cut off, as this point hardly sets well, and if taken off while the cluster is in an embryo state will appear more natural.

Watering and Syringing.—Syringing must be done frequently from the start till the vines commence to bloom, but watering must be attended to at least twice a week, and then no homoeopathic dose, but a thorough soaking, and along till the grapes begin to color. Syringing must be performed every

evening in good weather, until the grapes begin to swell off for coloring.

Thinning.—Thinning the bunches, and also the berries, is very important, as on severe thinning depends, in a great degree, color, size, and with good ventilation, flavor also.

Insects and Diseases.—In the graper, even with fair attention, we are often troubled with red spider; and there, also, we often find the mealy bug in all his glory. What brings him there? Some enthusiastic gardener who wants to grow a stove plant or orchid and has no other place for them. We also find green fly and thrip. All of these can easily be destroyed by syringing with the following mixture: 1 gill kerosene, 2 lbs. whale oil soap, 1 lb. tobacco soap, 80 galls. water. This will be more effective for the red spider than sulphur or its fumes, and also for mealy bugs. Fumigations of tobacco are effectual for destroying both the aphid and thrip.

Dry rot of the roots shows itself by the flagging of the young leaves when exposed to the sun, and shanking and shrivel, and all others, principally arise from severe summer pruning and over-cropping. I think if the vines were planted farther apart than they usually are, say six feet, there would be some chance for the plant to bear heavy crops, by reason of having plenty of foliage and healthy roots to carry on the circulation rapidly, and so draw and elaborate sufficient nutriment to sustain it. Naturally a plant extends its roots in proportion to its branches. As this cannot be very easily done in the graper, we ought to give the vines at least some chance for existence, either by cropping lightly or in some other way.

Varieties to Plant.—The Muscat of Alexandria, Black Hamburg and Black Prince, for productiveness, flavor and other good qualities, stand highest in the list of varieties; in fact, most of the others with high sounding names are hardly worth culture, many of our native varieties being superior in every respect.

Pruning.—I prefer the spur system to any others, and should say the double spur. By this mode we have always young wood which bears fruit but once, and is then cut out and replaced by a shoot of the same age which has not been allowed to bear fruit.

I am afraid I have exhausted your patience, but being a lover of the grape and its culture, will, I hope be accepted, as some excuse for this prolix paper.

Culture of the Quince.

We can only repeat what we have often said before, that there is no fruit easier raised or more profitable than that of the quince. The demand for it in all our markets would meet half a dozen times the present supply, at good prices. We formerly raised quinces to perfection, and discontinued doing so only because we had no use for the fruit.

People complain that they have been so unfortunate with quinces; but it has been simply their neglect. A crop of corn or peas, beans or grapes, or any other crop of garden or field, cannot be obtained without proper cultivation. They must be attended to. Fruit is generally expected to take care of itself; if it will not do that, why, it is a failure, and must be discarded. It is just so with the quince. It cannot be successfully and profitably raised without cultivation and care. It must be pruned, the ground frequently stirred, and the borer sought after at least twice a year and expelled. This is all the secret about it.

Get the "orange" variety, see that the trees are entirely free of borer before planting. Set six or eight feet apart, in rich soil. Bandage the stem with two or three wrappings of old muslin, or any kind of cloth, as far down as possible, as the roots start from near the surface. Let the bandage run six

or eight inches above ground, then pile the soil compactly a couple of inches around the bandage, and renew this early every spring; and fine, large, golden quinces, rivaling the largest oranges, will bless your efforts annually.

Should the borer by any means steal in, ferret it out carefully with a piece of wire. Should it, however, get the advantage of you, and should your trees become honey-combed, set out again young trees, so that by the time the old ones are gone the young ones will be finely in bearing. As the trees occupy but little space, this can be done on every farm with little or no trenching upon ground intended for other crops not nearly so profitable.—*Germantown Telegraph.*

Pots for House Plants.

The best pots for plants are undoubtedly those of common red clay, such as you see in every green house. They are cheap, porous, and not unsightly if kept clean. The florists all use them—and that is a proof of their excellence. If there is better kind, all things considered, those who make a business of raising plants would soon find it out. If you don't think the ordinary red pots are elegant enough for your apartment, you can cover them with the lattice-work *cache-pots* which can be obtained at any seed store at a cost of from fifteen to fifty cents. If you want to be elegant with still less expenditure, make your *cache-pots* of paper. Take a strip of glazed and rather stiff paper of a width corresponding to the height of the pot, and long enough to go three times around the pot's top circumference. Gather this from end to end like a fan, in folds from half to three-quarters of an inch in width; run a cord through the folds at top and bottom. Now glue the two end folds together, set your pot in, draw up the cords till your paper fits the pot at top and bottom, and your *jardiniere* is made. The paper may be ornamented by a pattern cut at the top, or by bands of gilt or other colored paper. Of course there are very handsome *jardinieres* to be had at the stores, some of them of the finest china and very costly, but plants do not thrive as well in them, and if they are used great attention should be paid to the drainage, as water does not evaporate from the glazed pots as rapidly as from the unglazed. Very pretty and inexpensive receptacles for plants, especially plants kept for their foliage, can be made of gracefully formed baskets, to which zinc linings have been fitted. The baskets can be gilded at no very great expense if the gold paint to be had at any paint shop is used. It is easily applied with a brush, and though not so bright as the gold-leaf gilding, it is very pretty and durable. Window boxes are always effective, and a well-arranged window box requires much less care than a window-sill full of separate plants. These boxes should be made of the same length as the window's width, and may be either placed on the sill, or, if required wider than the sill, small iron brackets may support them. Very good brackets are now sold at the five-cent stores. As they are much hidden they do no need to be highly finished. They can be easily screwed to the window frame, and removed with little defacement when it is desirable. As to the expense and ornamentation of window boxes, that is a thing to be decided by the purse and taste. I have seen extremely pretty boxes made of white pine, and a flat pattern of ivy leaves carved on it in relief. The work was done by a lad fourteen years of age, who took but three or four evenings at it. A simple pinewood box, painted black, with Japanese pictures fastened on the front in such a way as to leave a margin of an inch or two all around—the pictures to be held in their place by narrow gilt beading put on with brads—makes an effective and cheap plant box.

All wooden boxes should, of course, be lined with zinc, otherwise they will soon rot and become useless. The zinc lining should be so made that it can be easily lifted out of the wooden box as occasion may require. It is a good plan, for windows where there is not much sun, or where other conditions for plant growth are unfavorable, to have a box with two sets of linings. One can be kept growing in the sunshine to replace the other when the plants become unsightly. Window boxes made of tiles are very beautiful, and not very expensive; if there is skill enough in a family to paint the tiles, and knowledge of carpentry enough to join the woodwork, a box can be made all ready for the plants at an expense not exceeding \$4; such a box properly cared for will last for a generation, and be as fresh and pretty as when it was made; and after the woodwork is gone the tiles remain as the basis for another pretty *jardiniere*. I need not tell you what pretty objects are hanging pots and baskets. Not the scraggy, so-called rustic objects, nor the pottery imitations of ugly stumps and vegetables, but red pots set into brass rings, to which cords are attached, or on the pretty porcelain hanging platforms which are sold in the crockery shops.

Shells also make pretty objects when hung with cords and filled with vines. One of the simplest devices for hanging a plant in the window is to take the wicker-work that comes about the Florence oil flasks (to be had at any French or Italian grocery,) and, removing the flask, set in a common red flower pot of suitable size. The ingenuity that is a part of every woman's nature will suggest other forms for hanging pots. The simpler the device the better. The plant and not the receptacle should be kept the prominent object.—*Exchange.*

Earth For House Plants.

Earth for plants must have these qualities at least:—It must be porous, it must be rich in organic matter, and it must be free from all worms and insects. The best foundation for pot earth is decomposed soda. This can be obtained of a gardener, or if one have foresight and time it can be prepared by stacking up a pile of sods for a year and letting the rains and the frosts do the work. But decomposed sods are not absolutely necessary. A very good soil can be prepared by mixing one part of woods-earth—the decomposed leaves found about the ragged stumps of trees—one part sand, two parts loam, and one part of very well-rotted stable compost. Go in the autumn, and be sure that you take a bag with you, to bring home nuts and ferns and tufts of moss. The luncheon basket can be filled with the woods-earth. If it is of proper quality it isn't very heavy. Now for sand. Sea sand won't do, unless it is carefully washed to take out the salt. But sand such as the builders use will do admirably. Wherever there is a house going up and plastering being done this can be obtained. The well-rotted compost can be obtained easily enough from any stable, or a substitute may be found in the sweepings of the streets. The loam can be had from any back yard. Mix these ingredients well together, first baking or scalding the woods-earth to kill any grubs or worms that may be in it. Put your earth into the cellar; give it a good sprinkling. This completes the work of admixture by bringing the particles to closer contact. You have now your treasury of earth to be drawn upon as circumstances may require. It pays well to carefully prepare your earth, for plants. No subsequent attention will make up for badly composed soil. Success with plants, as with everything else, can only be attained by a thorough attention to details.

CAMELLIA seed often remain in the earth fully a year before germinating.

Potted Flowers.

The *Gardener's Monthly* gives the following rule for taking care of flowers:

"In taking up things from the ground for potting, care should be taken to have the pots well drained, with pieces of postsherd over the hole. The more rapidly water passes through the soil the better plants will grow. Pots could be made without holes, and the water would all go through the porous sides in time; but that is too slow a way, so we make a hole to admit of its more rapid escape, and we place the broken pots over the hole to make a vacuum, which assists the objects of the hole. In very small pots, or with plants which have strong enough roots to rapidly absorb all the moisture they get, and speedily ask for more, 'crocking' is not necessary.

As for the insects, the repeated use of the syringe is one of the best preventatives of their attacks, and if water can be used for syringing heated to 130°, there will be few complaints of insect attacks.

In growing winter flowers, much care is given to the nature of the soil, the aspect, and many points other than the most essential, which are the care of the roots of plants and preservation of the foliage from insects. When plants are over-watered the roots decay, and the plant become sickly and die."

Random Vegetable Notes.

Vegetable novelties of value have not been very plentiful of late. Each season brings us new tomatoes as plentifully as the new pens are in England. Occasionally a new culinary vegetable comes to stay and becomes popular. To this class, we think, belongs the Perfect Gem squash. This was introduced last year and we have tried it for the first time this season. Those who have not grown it should by all means put it on the list for next season. It belongs to the class of winter squashes, but is a delicious summer sort too—when ripe it bears no resemblance to the ordinary winter squash in taste, but is more like our summer squashes, with a buttery richness added, which, in our opinion, places it at the head of the whole squash family, either for summer or winter. It is said that they will keep in good condition until May. The season this year has been unfavorable for squashes, and we have no doubt they will be better in a season of greater heat. Plant Perfect Gem squash and prepare for a new sensation.

Among old vegetables which have been neglected until they are new again is the old Dutch Caseknife Bean. This, in our opinion, is without an equal among beans. This season our Lima Beans came up badly, and as the season was advanced we replanted the missing poles with Caseknives, a fortunate thing as it turned out, since the Limas that grew matured a very small crop of beans, while the Caseknife Beans did very well. It may seem like horticultural heresy, but we have all agreed that they are far ahead of the Limas as a table bean, and hereafter we propose to fill half of our space for pole beans with them. In our boyhood this was a popular cornfield bean on the Eastern Shore, but it has been so many years since we had seen them that they seemed an entire novelty. They are a good snap bean when young, but their great value is as a shelled bean, both green and ripe.

Mr. Sanford's "Tomato Experience," given in such an interesting manner in your last, agrees perfectly with my own as to the value of early sowing and pruning, and proves that the earliest sown plants bear first, if kept in a healthy and thrifty state. Mr. S.'s February sown and pruned plants were later than the January sown ones, and we have no doubt that he might have pruned his March plants and forced them as hard as he could, but they would not have gotten over the matter of age. Of course, plants grown

by inexperienced people and allowed to stand crowded and long drawn until planting time will not produce early fruit, no matter how soon they were sown, because the plants are in a consumptive state and requires so long a time to recover their vitality that they are really not so good as plants raised from seed in the open garden. We agree perfectly with Mr. Sanford that it is time lost to move tomato plants from the frames to the open ground until the soil is warm enough to continue their growth without check, and the same may be said of all other sorts of tender vegetables transplanted from protected beds.

This season has been very favorable to the rapid growth of celery, but we fear that the greater part of the crop will keep badly. We never had such a growth of celery, but we have never seen it rust so badly. A very large area has been planted in this crop around the city, but I am satisfied that those market growers who planted late will reap the greatest profit, as the early celery which is rusting badly will have to be forced on the market as it will not keep. We are digging celery now which has about the appearance it usually has about April 1st.

We were in hopes that the cabbage worm would pass us by this season as our summer cabbages completed their growth undisturbed, but the ravenous "varmints" have made such persistent attacks on our fall sown cauliflower plants that after sowing them four times we have only succeeded in saving our plants by nursing them in flats in the greenhouse and picking the worms off every morning. Our past experience tells us that this hand-picking will have to be kept up the greater part of the winter in the frames.

We made a second trial of the Italian onions the past season using seed of the Queen, Marzajole and Giant Rocca. Our experience with these onions proves that fair sized onions of these varieties can be grown here from the seed on any good soil that can be worked very early in spring. In our own case the difficulty is that we can seldom put our soil in good order before April and in a dry season their growth is cut short before making large sized bulbs. Any one having soil that can be worked early in March could be reasonably certain of a good crop of large onions, especially of the Giant Rocca. The Queen and Marzajole are both handsome flat, white onions of moderate size. The Rocca is a large oval brownish bulb. The seed catalogues say these Italian onions are great keepers, but in my experience of only two seasons I find that I cannot keep the white sorts at all. The Marzajole I grew ten years ago on the Eastern Shore, but as the whole crop was shipped as soon as ripe, I then had no trial of their keeping qualities. I would like to hear the experience of others who have tried them. Aside from the difficulty in keeping them I am very much pleased with these onions, particularly the white ones. If any of your readers can supply "buttons" of the old "top onions" I would be glad to know of it as I am anxious to have them once more. These were almost the only sort of onions grown in Southern Maryland and Virginia, in my boyhood.

W. F. MASSEY.

Hampton, Townsontown, Md.

Raising Plants from Cuttings.

All plants which can be propagated by cuttings of the ripened shoots should be trimmed, and the cuttings planted as soon as the leaves have dropped. Rather than delay the operation, the leaves can be stripped off, for the sooner the cuttings are set out the sooner will they root. Red, white and black currants, grape vines, figs, gooseberries, willows, poplars, Spiraea, Forsythias, Weigelas, privet, Deutzias, Hydrangeas, honeysuckles and Hibiscus are some of the plants which can be raised by cuttings of the young growths of the present year.

Cuttings of these should be about eight inches in length, and inserted to their full

depth in the ground, leaving the top of the cutting level with the surface of the soil, and covered over with a sprinkling of leaves or strawy manure, which need not be disturbed until the buds push forth next spring.

But the precaution must be taken to plant in a well drained or a sandy soil. When they are set in undrained, heavy soil, the freezings and thawings of winter will draw them to the surface. This, however, can be obviated by covering with leaves, &c., sufficient to exclude frost.

AGRICULTURE IN THE SOUTH.

Its Needs and Opportunities.

By TH. POLLARD.

Ex-Commissioner of Agriculture of Virginia.

We were discussing in our last the subject of apples and grapes as applicable to Virginia, and we think to a great extent to Maryland. We cannot speak for the country south of us, though we think the Scuppernon is the grape mostly grown in these states particularly in North Carolina, where it is an enormous product, and where a very good sweet wine is made from it. It is said one vine frequently produces forty to fifty bushels. This is done by its putting down layers which root in every direction, so that one parent vine will ultimately cover a large surface, sometimes an acre.

Grapes flourish in every portion of Virginia, and there is no section where we do not find native vines and some very large ones. Piedmont Virginia is the great region for wine making, a region, we suppose, equal to the best portions of France for this industry. Grapes flourish in the Valley, but for some reason do not seem to succeed as well as in Piedmont for wine making—why, we do not know. In Middle Virginia good wine has been made wherever attempted, but none yet made has come up to that of Albemarle, Nelson, Prince William and Warren. In Tidewater Virginia it is thought by some who have tried wine making that the grape ripens too early to mature a supply of saccharine matter. This was the opinion of the late Dr. Briggs, of Surry county, and at one time professor in the Maryland Agricultural College. These opinions may have to be modified by future experience, for wine making is yet in its infancy in this country.

In a report issued from the U. S. Agricultural Department, 1881, prepared by Wm. Murtie, Ph. D., it is said there is much to be done in the improvement of the culture of the vineyards, and many reforms to be made in the cellars of producers, yet even now good sound wines are not hard to find, and dealers and consumers will do well to study these sources of supply. The importance of this is shown in the following figures representing the importation of foreign wines to the United States in 1879 and 1880 (we give only the values):—In 1879 the value was \$4,889,318, and in 1880 it was \$5,936,091. This represents a total of about 5,000,000 gallons for each year. The Commissioner sent out in 1880 about 15,000 circulars in regard to grape production in the United States, receiving replies from not more than one half. The returns for Virginia indicate 2,000 acres in grapes, with the production of 232,479 gallons, with a money value of \$200,045.25. We suppose the acreage in Virginia has increased very decidedly since 1880. California is the largest grape growing and wine producing State in the Union, having 33,368 acres in vines, producing 13,557,155 gallons, valued at \$4,046,865.80.

In Virginia, Albemarle is the largest grape producing county and is rapidly adding to her vineyards and wine production. In 1880 the acreage in wine is, from the report referred to, 550; yield of grapes per acre, 3,000 pounds; wine per acre, 200 gallons; money value, \$44,000.00. Thus far phylloxera has not injured American vines, though it is said to have originated in California, and

this is a strong evidence of their hardiness and the suitability of our climate and soil for their cultivation, and, in view of the great injury being inflicted upon the vineyards of France by this dreaded insect we should encourage grape growing in those portions of our country suited to it, and we believe Virginia is eminently one of those sections. In 1879 I sent out a circular to ascertain the status and profits of grape growing in some of the prominent points in Virginia, with the varieties raised. The returns which we give are principally from Albemarle, a few from Nelson and two from Henrico.

REPORT OF VINEYARD OF MR. WILLIAM HOTOPEFF.
Two Miles from Charlottesville, Albemarle County, Va.

| LOCATION AND SOIL. | NO. OF ACRES BEARING IN 1879. | COST OF CULTIVATION PER ACRE. | NO. OF POUNDS SOLD IN 1879. | MONEY VALUE OF CROP OF 1879. |
|---|-------------------------------|-------------------------------|-----------------------------|------------------------------|
| East and South 1/2 acre of slate and 1/2 acre of red; south-east; red. | 1 | \$200 per year. | 33,368 | \$748.03 |
| 2/3 acre of slate and 1/3 acre of red; south-east; red. | 1 | | 4,400 | 230.00 |
| 1/2 acre of slate and 1/2 acre of red; south-east; red. | 1 | | 2,770 | 110.76 |
| 1/2 acre of slate and 1/2 acre of red; south-east; red. | 1 | | 4,124 | 164.90 |
| 1/2 acre of slate and 1/2 acre of red; south-east; red. | 1 | | 845 | 42.25 |
| One-third red sand, two-thirds slate (gray). | 1 | | 52,488 | 2,671.90 |

* No doubt for the whole vineyard.—Commissioner.

REPORT OF VINEYARD OF MESSRS. MINOR & CO.,
Four Miles from Charlottesville and Ohio Railroad, Albemarle County, Va.

| LOCATION AND SOIL. | NO. OF ACRES BEARING IN 1879. | COST OF CULTIVATION PER ACRE. | NO. OF POUNDS SOLD IN 1879. | MONEY VALUE OF CROP OF 1879. |
|---|-------------------------------|-------------------------------|-----------------------------|------------------------------|
| Red mountain land on S. W. range of mountains; red, sandy, and S. W. soil rich, partly gravel, particularly heavy clay. The vines on gravel far best. | 10 | \$100 per acre. | 40,376 | \$83 per acre. |
| Concord. | 5 | | 2,140 | 19 per acre. |
| Delaware. | 5 | | 14,254 | 78 per acre. |
| Martha. | 2 | | 1,564 | 200 per acre. |
| Ives Seedling. | 1 | | 5,882 | 37 per acre. |
| Clinton. | 1 | | 2,582 | 91 per acre. |
| Norton's Va. Seedling. | 1 | | | |

"I am unable to give the cost of cultivation with accuracy, our vineyard being always worked by the same year-labor employed on the farm, and no separate account kept for each. In the foregoing statement all expenses have been deducted from the 'money value' per acre, except the regular cost of cultivation, which I estimate will not exceed that of a crop of corn by more than one-fourth. The reason the Ives' Seedling gives a money value so greatly above any other variety, is to be found in the unusually heavy yield this year, and that a large proportion of this variety was sold in the early markets North as table fruit, and consequently at better prices. This was due to its early ripening."

"O FORTUNATOS NIMIUM SUA SI BONA MORINTUR
AGRICOLAE." *Virg.*

By **SAMUEL SANDS AND SON**

At No. 128 West Baltimore Street,
(Sign of the Golden Plow.)

BALTIMORE, MD.

WILLIAM B. SANDE, Proprietor.

SAMUEL SANDS, } Editors and Publishers

Dr. THOMAS POLLARD, Associate Editor.

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* Subscribers who have minerals, ores, marl, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent veterinary surgeon, by giving a plain statement of the symptoms, etc.

At the office of THE AMERICAN FARMER are located the offices of the following organizations, of each of which its proprietor, Wm. Sands, is secretary:

Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, F. of H.
Agricultural Society of Baltimore Co.
Also, of the **Maryland Poultry Club**
Thos. W. Hooper, Secretary.

BALTIMORE, NOVEMBER 15, 1882.

The Farmer for 1883.

Our readers will remember, we trust, keep the claims of THE AMERICAN FARMER before their farming and gardening friends as they select their reading matter for the coming year. We hope to make it in every way worthy of their support, and shall try to give it features which will be improvements on its past.

Mr. Emory's Sale.

Attention is drawn to the public sale to take place on Thursday, November 23, at the Poplar Grove Stock Farm of Mr. Edward B. Emory, near Centreville, Maryland, which will comprise horses, short-horn cattle and Cotswold and Southdown sheep. The offering puts a choice lot of young stock on the market, the Short-horns being not only choice individuals but from fashionably bred strains, and the colts and sheep all promising animals. Mr. Emory's Short-horns were shown at many of the Fairs in this State and Delaware in 1891, and were very fortunate, gaining many first prizes wherever shown.

Besides the stock to be sold at auction the reserved herds of Short-horns and Be shires and flocks of Southdown and Co wold sheep will be ready for inspection a ny individuals can be bought at priv ate sale.

A special steamer, the Corsica, will leave Pier No. 7, Light street wharf at 7 A. the day of the sale for Mr. Emory's father, returning the same evening.

**Fall Sales of Jersey Cattle in New York—
Some of Our Baltimore Breeders
Contributors.**

At the three days' sales of Jersey cattle held in New York, November 1st, 2d and 3d, we noticed that some of our Baltimore county herds were represented, and the cow Rosa of Messrs. Watts & Seth sold for \$1,66 the highest figure reached for females. The celebrated bull Pedro, son of Eurotas sold for \$2,500.

Mr. J. E. Phillips, of Baltimore county, contributed five head at the first day's sale, which brought moderate prices. The character of the animals offered at the three day sale was, with a few exceptions, much below the average and failed to attract the better class of buyers, which is shown by the fact that since the sale \$5,000 has been offered and refused for Pedro, and Rosa was resold before she left the building at the reported price of \$2,500.

Messrs. Watts & Seth bought at the K
 logg sale cow Arawana Poppy 6,053, in c
 to Coomassie bull Catone, and heifer A
 sistors to their celebrated Arawana Butte
 wana Chevre Feuille, both of which are h
 cup. Mr. F. Von Kapff bought at a hi
 figure bull calf Eurotas Duke, son of Du
 of Darlington, who is out of Eurotas, 7
 lbs. in one year and who is the sire of Bomb
 who at four years old has just completed
 public test in which she made 21 lbs., 11 1/2
 of butter in 7 days.

These additions to the Windsor and Stoneleigh herds show that our Baltimore county breeders are still on the alert, and determined to maintain their reputation of having the best blood as well as the best individuals. As a further evidence of this we mention that choice representatives of the two herds have just been shipped at great risk and expense for service to the infant son of Coomassie, King Koffee, who is a son of Sir George, who recently sold at auction in New York for \$5,100, the highest price ever paid for a Jersey. King Koffee has, therefore, 56½ per cent. of the blood of Coomassie.

Dog-Proof Fences.

Messrs. Sedgwick Brothers, who are advertisers in our pages, write to say that inquirer A, page 303, in our last issue, will find their network wire what he wants. They will guarantee that, unless it is a very small dog or one trained to climb over netting, none will get over it. They add that they have never heard of a dog or wolf getting through or over their netting.

Buckwheat as Food.

A French scientist, who has investigated buckwheat, gives the following as the result of his researches: Buckwheat cakes are equal to pure white bread as regards the phosphates or bone-making material and nutritious principles which they contain, and superior to bread in fatty matters. A general yield of buckwheat when cooked about three times the weight of flour is shown, showing that such flour will retain from twenty-one per cent. of water. Between different batches of ground buckwheat there is a great dissimilarity of composition, one batch containing nearly seven times as much nitrogen, twenty-five times the amount of phosphorus, and a hundred and fifteen times as much fatty matter as another. The bran is the richest portion of the buckwheat, but cannot be digested by weak stomachs. The fine qualities of buckwheat flour, and the whole-mill-dust especially, are very suitable for children and persons in poor health, while the stronger varieties require a strong stomach and much exercise for their proper digestion.

REPORT OF VINEYARD OF DR. JOHN R. BAYLOR,
at *Altamont, on Chesapeake and Ohio Railroad, Nelson Co., Va.*

REPORT OF VI EYARD OF MR. J. R. BRYAN, JR.,

REPORT OF VINCARD OF MR ALBERT L. HOLLADAY,

"I cannot give a more accurate statement, as my vineyard was managed by a tenant. The above are his returns to me of sales. Concords and Ives selling for the same, are reported together. The money value of 'table grapes' is net, after deducting \$78 paid for boxes and express freight. From the above money value must be deducted the cost of cultivation, as estimated above.

Respectfully, &c. J. R. BRYAN, JR."

[illegible]

REPORT OF VINEYARD OF DR. O. A. CRENSHAW,
One Mile from Richmond, Henrico County, Virginia.

REPORT OF VINEYARD OF MR. FRITZ BAIER,

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MR. ALLEN E. SMITH reports to *The Farmer's Review* an experience in OILING WAGON WHEELS AND OTHER WOODWORK, which accords with statements previously made in these columns:

"I have a wagon of which, six years ago the fellows shrunk so the tires became loose I gave it a good coat of hot oil, and every year since it has had a coat of oil or paint sometimes both. The tires are tight yet, and they have not been set for eight or nine years. Many farmers think that as soon as their wagon fellows begin to shrink, they must go at once to a blacksmith shop and get the tires set. Instead of doing that which is often a damage to the wheels, causing them to 'dish,' if they will get some linseed oil and heat it boiling hot, and give the fellows all the oil they can take, it will fill them up to their usual size and tighten the tire. After the oil a coat of paint is a good thing to help keep them from shrinking, and also to help keep out the water. If you do not wish to go to the trouble of mixing paint, you can heat the oil and tie a rag to a stick and swab them over as long as they will take oil. A brush is more convenient to use but a swab will answer if you do not wish to buy a brush.

Home Department.

Screens.

Happily æstheticism has found a favorite outlet upon the much neglected screens. Formerly where modern improvements had not so strongly asserted themselves and open fires were the rule, fire screens were among the necessary articles of furniture, but they became useless with the advent of the "hole in the floor," which for a time constituted the fireside, around which a man might gather his family, and would have been lost to posterity but for survival of an occasional garret or lumber room. Among the treasures resurrected from these ruins of æsthetic wealth, a few of them are brought forth and once more find themselves in places of honor and usefulness, reflecting the jubilant play of the restored firelight and holding it within reasonable bounds. The usefulness of screens, however, is not confined to open fires, and they should be more generally found in every sitting or sleeping room as a protection from drafts of open doors and leaky windows. With such protection the air may be allowed to circulate more freely than without it, much to the advantage of health.

Economical screens may be made with a little ingenuity and some taste. Towel racks can be changed by the shifting of some of the cross bars so as to make a flat square opening, on which any material you choose can be hung either with brass rings or by sewing it skillfully at the top and bottom, either to present a plain or fluted surface. The frame should first be painted black.

Clothes horses (the old fashioned folding ones) are also good foundations for screens. Unbleached cotton tacked neatly and closely on one or both sides forms the foundation for such decorations as may be desired. Cretonne or wall paper makes very nice coverings, and there is also room for the exercise of artistic talent, either in the use of the brush or pencil, or of taste in the selection of pictures. The frame should be painted black and the edges where the tacks show can be covered by narrow gilt bordering. Such frames can be found of various sizes, suitable for any purpose, for a fire screen to one large enough to form partitions in a room, to make it private to two or more persons.

A Table Cover.

A pretty and inexpensive table cover may be made for "the sitting room" of cretonne, the material which has so entirely displaced the furniture calicos of the past. It can be bought for various prices, from ten cents per yard to one dollar, according to quality. Some of the cheapest covers are in beautiful designs and colors, but of course do not stand wear or washing as some of the higher priced will. For a table cover it would be as well to use the cheaper grades, and then when soiled it can be replaced by a new one (using the old one for some common purpose) without extravagance. For this purpose take a square of one kind for the centre—small figured is the prettiest—another kind with colors harmonizing or prettily contrasted, but with pattern running in stripes, for the border. Divide this lengthwise according to the stripes, or the width you wish the border. Probably you will need half the width. Match the stripes at the ends and mitre the corners. If you take half the width of the goods for the border it will take four times as much for the border as for the centre.

It will improve the appearance to cover the seams with feather stitching of some conspicuous colored coarse silk or single zephyr. Line the cloth and face the corners (which show when hanging down) with something neat and suitable. Nothing helps more to give a cheerful, warm look to the room than a table cover of bright colors—while the marble tops have just the opposite effect.

The Living of Farmers.

There is much in the following extract from the *Toronto Globe*, which is applicable to other sections than Canada, but within a comparatively few years there has been a great reform in this matter among our farmers.

Many men and more women object to living on farms because the food offered in farm-houses is not as desirable as that found on tables in villages and cities. There is no good reason why as excellent food cannot be afforded on farms as in large towns. Most farmers might live well and be at no more expense than they are at present. Most of the articles that pertain to good living are or can be produced on farms with very little trouble or expense. The water afforded by springs and deep wells is often superior to that supplied by the service pipes in cities. Fresh butter, pure milk, and newly-laid eggs can at all times be obtained, and these deservedly rank among luxuries. They are articles hard to obtain in large towns, even by persons of wealth. At most times of the year there are fowls fit to be killed as occasion may require. During the spring there is veal, and during the summer and fall lamb, for fresh meat. If a farmer has an ice house it is comparatively easy to have a supply of fresh meat of home production a large proportion of the time. Fresh fish are, of course, difficult to obtain unless a farmer has a fish-pond or lives near a lake or river. He can, however, have salt and smoked fish as often as they may be desired to form a change in the ordinary bill of fare. As to flour and meal and all kinds of prepared grain, they are as easily obtained in the country as in the city. The like is true in relation to tea, coffee, sugar, and all other kinds of groceries. The articles above enumerated constitute nearly all the substantial things that pertain to good living.

Fine fruit, fresh from the tree, bush, or vine is one of the most essential elements of good living. It can be produced as cheaply as any kind of food, and is vastly more wholesome and nutritious as well as more palatable than most of the articles found on farmers' tables. A small plot of land will produce all the strawberries, gooseberries, red, white, and black currants that any family can consume during the season of their ripening, and enough to supply them with canned fruit during the balance of the year. As to grapes they are as easily and cheaply raised as potatoes, and are adapted to a large number of purposes. During at least three months they will supply the table with a most delicious and wholesome article of food which is relished by all ages. As a breakfast dish grapes are unsurpassed. As table ornaments they are the equals of flowers. They are excellent when canned or made into pies and jelly. Wine can be made of those that are quite inferior. By taking pains with their preservation, they may be kept in a fresh state till the winter holidays. In some parts the peach, and in many parts the plum and pear do well. As to apples, they will grow anywhere that corn will mature, and in many sections besides. Cranberries and blueberries can be raised with very little trouble or expense. With all these fruits at his command no farmer can afford to set a poor table.

Next to fine fruits, fine vegetables add as much as anything to the essential part of good living. It is singular, however, that while they are always found on tables in towns and cities, they are seldom seen on tables of well-to-do farmers in the West. Nearly all farmers raise common potatoes, cabbages, beets, and onions, but the list of vegetables extends little further than these. They have no asparagus, lettuce, radishes, egg plant, celery, cress, or pie plant. They have a "meas" or two of green peas, and a few string-beans, but no attempt is made to

have a succession of them during several months. They have no Lima beans, and few or no good bush-beans. Ordinarily they have poor tomatoes and cucumbers. Many farmers raise no pumpkins, and are at no pains to raise squashes for use during the winter and spring. If they raise turnips, they are of the varieties that are only fit for stock food. No water cress is found in any of the springs or streams on the farm, and no grape-vines flourish on the high places that are valuable for the production of little else. Comparatively few farmers raise melons, though they will grow with very little trouble. In short, farmers deny themselves most of the cheap luxuries of life that they might enjoy to the extent that no other class of persons can for so little labor or expense. They seem to think that great skill is required to produce fine fruit and vegetables, while in point of fact they are raised as most field crops. They insist on eating large quantities of pork on the score of economy, while it is actually one of the most expensive articles of food at present prices.

What Shall the Children Eat.

Providing that many children cannot and will not eat oatmeal, Graham and rice, except at rare intervals, it becomes a study what substitute that may furnish material for the growth of their unresting little bodies and brains. Too often the noon lunch is made of remnants of cake, sauce and pie, instead of one or two nourishing dishes in which a child's preferences should be indulged as far as may be healthful. In one home this is made the children's special meal, just as the later dinner is planned to subserve in particular the needs and tastes of the house. Nothing has been of greater service to us than the often misunderstood and mutilated bean. Cooked in a simple way, not borrowed from cook books, it has contributed largely to the growth of young forms that have both strength and endurance, and minds that are quick, alert, and take "learning" almost like inspiration. Before breakfast wash a quart of the best white beans; put them over the fire in a tin pan with plenty of boiling water. Let them just come to a good boil, then drain off this water and add fresh boiling water to cover them about an inch deep or more, and a tablespoon of salt. Cover them and move them back on the range to where they will only just simmer, adding water if needed. Two hours before noon add a large tablespoon of sugar, and a cup of rich milk or cream, or an equal amount of good beef gravy. Cook slowly two or three hours longer, and let them be full of juiciness or gravy when taken up—never cooked down dry and mealy. Let us here remark that older ones in the family prefer beans prepared thus to any Boston baked beans or bean porridge known to the descendants of Mother Goose. The hostess or landlady who would hesitate to present at her table a dish of plebeian white beans, will find that the more assuming dark-hued kidney bean is delicious cooked in the same way. In the race of beans "color" is a passport where their paler brethren must stand aloof. The black beans, however, are apt to be too rich for children, which brings us back to our subject. Highly seasoned or variously flavored soups do not find favor with them like a clear strained stock made from a soup-bone simmered four or five hours, and seasoned only with salt and a mere suggestion of vegetables. Give them small crackers to float in it. One little boy furnishes imagination for the feast, and "plays" that his dish of soup is the ocean, his crackers islands or sail-boats, and his spoon a big ship searching for Robinson Crusoe. Or his saucer of oatmeal is a snow-covered mountain, with rivulets of milk down its sides for snow-slides and glaciers,

or streams of berry juice for molten lava, etc. Fancies like these have almost as much power to give a charmed relish to food as the carefully cooked viands themselves. If bread is a little stale, make Queen's toast of it. Cut it into half slices, not very thin, and dip it into two eggs beaten up with a large cup of milk. Lay it on a hot griddle and brown it nicely on both sides. If any addition is desired, a little sugar or canned fruit spread over it will answer nicely. Milk toast slightly thickened and salted is another much relished lunch. Little cornmeal or Graham gems are fancied for their cunning shape when the large brown loaf might not be attractive.—*Cor.*

Sick Children.

The vicissitudes necessarily incident to an out-door and primitive mode of life are never the first causes of any disease, though they may sometimes betray its presence. Bronchitis, now-a-days perhaps the most frequent of all infantile diseases, makes no exception to this rule; a draft of cold air may reveal the latent progress of the disorder, but its cause is long confinement in a vitiated and overheated atmosphere, and its proper remedy ventilation and a mild, phlegm-loosening (saccharine) diet, warm sweet milk, sweet oatmeal porridge, or honey water. Select an airy bed-room, and do not be afraid to open the windows. Among the children of the Indian tribes who brave in open tents the terrible winters of the Hudson Bay territory, bronchitis, croup and diphtheria are wholly unknown; and what we call "taking cold" might often be more correctly described as taking hot; glowing stoves, and even open fires, in a night-nursery, greatly aggravate the pernicious effects of an impure atmosphere. The first paroxysm of croup can be promptly relieved by very simple remedies—fresh air, and a rapid forward-and-backward movement of the arms, combined in urgent cases with the application of a flesh-brush (or piece of flannel) to the neck and the upper part of the chest. Paregoric and poppy-syrup stop the cough by lethargizing the irritability and thus preventing the discharge of the phlegm till its accumulation produces a second and far more dangerous paroxysm. These second attacks of croup (after the administration of palliatives) are generally the fatal ones. When a child is convalescing, let him beware of stimulating food and overheated rooms. Do not give aperient medicines; costiveness, as an after effect of pleuritic affections, will soon yield to fresh air and vegetable diet.—*Popular Science Monthly.*

Now is the Time to Put the Winter Bedding in Order.

The mattresses should all be sunned and thoroughly aired; if soiled, rip the ticking off—this is not at all difficult to do; have it washed, and it should be starched a little; while it is undergoing this operation the hair, or wool, or cotton which composes the filling can be aired by placing it carefully on a large sheet and laying it where the sunlight can shine on it; if it has been used for several years, it will cost but little, and will well repay the expense, to have it picked and sorted over before being upholstered. Blankets ought also to be thoroughly cleaned. If to make them less burdensome and difficult to handle, you cut the long double ones in two, overcast the ends with worsted or yarn of scarlet or blue to match the stripes in the blanket. Do this with button-hole stitch; it takes a few minutes only to do this, and it is neater than a hem, and is really a pretty addition to the blanket. Very pretty comforters for children's beds are made of the thin cotton cheese cloth; tack them and bind them with bright colors. If for use in the crib, and edge of worsted crocheted

around it makes it look attractive. Crochet two or three rows in shell-stitch, with a scallop to finish it. It is an excellent plan to put a strip of white cotton cloth at each end of a common comforter. It can be removed and washed with much more ease than to wash the comforter itself, and with much handling, even with perfectly clean hands, it is likely to become soiled. The ends of white spreads are improved by being worked with white cotton in buttonhole stitch. This is particularly the case where the spread has been in use a good while and the hem is worn and the edge frayed. All you need to do is to trim off the threads so they will not ravel and buttonhole the edge.

—N. Y. Post.

Storing Potatoes.

There are three methods of storing in general use, each of which has its merits and its champions. These are storing in barrels, bins, heaps or pits. The same general principles underlie these several methods, viz: Protection against frosts and changes of temperature, freedom from moisture and avoidance of heating caused by storing too deep. The advantages claimed for storing in barrels are that the roots are easily handled, do not suffer from abrasion, can be easily examined, and if disease appears it can be readily checked and removed. The chief objection to this method is the time and expense involved when the crop is a large one. Bins are coming into use, especially in localities near large cities, for the potatoes can at any time be readily reached and prepared for market. A cool, dry, well-ventilated cellar, with the light excluded, is an admirable place in which to store potatoes. The argument in favor of storing potatoes under ground is that there is little if any loss by evaporation. Objections to the plan are the labor involved in opening the banks when the roots are required and the risk involved from the extremes of too close or insufficient covering. When pits are employed it is important that arrangement be made for ventilation. When stored in cellars, barns or root-houses it is a safe plan not to fill the bins with roots to a depth exceeding three or four feet. It has been claimed that lime sprinkled in barrels or bins at the rate of one pound to each barrel, tends to prevent decay by acting as an absorbent and neutralizing the earthy odors. The importance of excluding light from potatoes and keeping them as cool as possible without freezing cannot be over-estimated.

The *Grange Bulletin* says: "A friend of ours who grows cabbages extensively for market has found that saltpetre dissolved at the rate of one and a half to two ounces to a gallon of water and applied with a sprinkler will completely banish the European cabbage worm. It has proved not only a sure cure for this nuisance, but a special fertilizer in stimulating an increased growth of plant. Saltpetre (nitre) if purchased by the quantity can be secured at low rates. It is now quoted 54¢ per cwt. per pound. Give it a trial."

Baltimore Markets, November 15.

Flour.—The market is easy. We quote: Howard Street Super, \$3.25@3.75; do. Extra \$4.00@4.62; do. Family \$4.75@5.75; Western Super \$3.25@3.75; do. Extra \$4.00@4.62; do. Family \$4.75@5.75; City Mills Super \$3.50@4.00; do. Extra \$4.25@4.75; do. (Rio Brand) Extra \$5.75; Baltimore Winter Wheat (Patent) \$7.00; do. Fancy Brand \$5.85@6.00; Fine \$2.75@3.00; Rye Flour \$4.00@4.50; Baltimore Pearl 11-minny \$5.00. Corn Meal per 100 lbs. \$1.80@1.85.

Wheat.—The market was steady to firm. We quote: Spot 106½@106¾; December 107½@107¾; January 109@109½; February 110½@111½; 8, 104@107½; S. Longberry 108@114.

Corn.—Firm in tone but quiet. We quote: Spot (6-1); November 84@86; Year 85½@86½; January 86½@87½; New White 86@88; do. Yellow 86@87.

Oats.—Low, buyers holding off in expectation of lower figures. We quote: mixed Western at 33c. and bright do. 45c.

Rye.—Dull, with a moderate offering and demand. Only small sales for Maryland at 65c.

Seeds.—Steady and quiet, with a fair working demand. Western is quoted at 7½¢ per lb. for common to good, 9¢ per lb. for prime, and 9½¢ per lb. for choice.

Mill Feed.—Steady to firm. City is quoted \$19 per ton, Western winter Middlings sold at \$19 for two car loads, and Bran steady at \$18.

Hay and Straw.—The offering of Hay is very liberal and the market is quiet and nominally steady. We quote as follows: Choice Cecil county Timothy at \$17@19; New York and Western \$14@16; Maryland and Pennsylvania \$14@15; mixed \$11@13 per ton; Clover \$10@12. Straw is quoted at \$8@9 for Wheat; \$11@13 for Oat; \$12@13 for long Rye, and \$10 for short do.

Provisions.—Quiet and easy, with prices generally lower to sell. We quote packed lots as follows: Bulk shoulders, packed 9½¢; bulk long clear sides 12½¢; bulk clear rib sides 12½¢; bacon shoulders 12½¢; bacon clear rib sides 16c; 4-buns, sugar-cured 15½¢@17c; do. shoulders, sugar-cured, 12c; do. breasts, sugar-cured, 15c; lard, refined, tierces, 18½¢; pork, mess \$22.75.

Butter.—The demand for the strictly prime grades is active and the market is firm, with a moderate supply. Other quotations are very dull. We quote as follows: New York State choice 30@32c; Creamery fancy 37@40c; do. prime to choice 33@35c; Western Reserve choice 28@29c; do. good to prime 20@22c; Southern Ohio and W. Va., choice 22@25c; do. fair to prime 17@22c; Western rolls 23@25c; Near-by receipts 18@25c.

Cheese.—New York State is quoted at 13@13½¢ for fancy late made and 12@12½¢ for good to prime, and Western 12@12½¢ for choice and 11@11½¢ for good to prime; skims 9@9½¢ for prime, 8@8½¢ for fair to good, and 5@5½¢ for common.

Eggs.—Active and firm at 30@31c. per dozen for Western, the latter in case.

Poultry.—The inquiry for live Chickens is moderate and the market is between seasons. Old are quoted nominally at 6@8c. per lb. and young at 10@11c. The supply of dressed stock is small.

Cotton.—The demand for spot was rather better yesterday and the market was less depressed, though not active. The official quotations are as follows: Middling 10½¢; Strict Low Middling 10½¢; do. Low Middling 9½¢; Strict Good Ordinary 9½¢; do. Good Ordinary 9½¢; Ordinary 8½¢.

Tobacco.—Leaf. Business moderate. We quote: Maryland inferior frosted \$2.50@4.00; do. sound common \$4.50@5.50; do. good common \$5.50@6.50; do. middling \$7.00@7.50; do. good fine red \$8.50@10.00; do. fancy \$10.00@15.00; upper country \$4.00@10.00; do. ground leaves \$2@3.

Live Stock.—Beef Cattle.—Market very slow. We quote: Best \$3.50@4.00; that generally rated first quality, \$4.50@5.00; medium or good fair quality \$3.50@4.00; ordinary thin steers, oxen and cows, \$2.50@3.50; extreme range of prices, \$2.50@6.00. Most of the sales were from \$4.00@5.25 per 100 lbs. Hogs.—Trade is moderately active. Rough Sows and Stags sell at 8½¢@9c, other grades 9@9½¢, and a few extra at 10c. per lb. gross. Most of the sales are made at 9½¢@9c. Sheep and Lambs.—Trade is generally sluggish, as there is but little outside demand, and butchers are buying sparingly. Good stock sheep are in fair demand. We quote butcher sheep at 8½¢, and lambs at 4½¢ per lb. gross. Stock sheep at 11.75@13.50 per head, and weathers 8@8½¢ per lb. gross.

Warner's Safe Kidney and Liver Cure

Marvelous.—How wonderfully popular J. M. Laroque's Anti-Bilious Bitters is with the people, and how quickly Dyspepsia, Headache, Constipation and all forms of Liver Disease yields to its influence. 25 cents a paper; \$1 a bottle. W. E. Thornton, Baltimore and Harrison Streets.

He Spoke From Experience.
BUCHANAN, Ga., July 5, 1881.
H. H. WARNER & Co.: Sir—I have been taking your Safe Kidney and Liver Cure for Bright's Disease, and find it the best I ever saw or heard of. DAVID BOWLING.

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OVER THE GARDEN WALL, and all the latest and most popular Sheet Music of the day, now retelling at 30 to 75 cents per copy, for sale at all news dealers and stationers. Having just opened our branch house here, we are prepared to supply dealers and agents at liberal terms. Send for our circular.

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BERKSHIRE PIGS, PEKIN DUCKS, BRONZE TURKEYS.

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Bel Air, Md.

Jersey Cattle Wanted!

TWENTY HEIFERS, 19 to 24 months old and in calf, and TWENTY HEIFER CALVES 6 to 12 months, registered, or eligible to registry in A. J. C. C. H. R. Address with prices,

J. T. & W. S. SHIELDS,
Dean's Station, East Tenn.

FOR SALE.

Channel Island Cow, "ALDERNEY MAID," five years old, black and white, first class milkier, in calf to "CARROLL" 8000, due to calve about December 15th. Sold for no fault and only to reduce stock. Price \$60. A good chance to get a fresh cow for winter.

F. B. STEINER,
Rhode River P. O., A. A. Co., Md.

PLYMOUTH ROCKS!

T. W. HOOPER,
LAKE ROLAND, Baltimore Co., Md.

OFFICE OF The People's Mutual Live Stock Insurance Co. OF BALTIMORE, MD., 23 SOUTH STREET.

Baltimore, October 20, 1882.

DEAR SIR:

We respectfully call your attention to the following Statement of Losses paid by this Company. Our mortality in July and August was excessive, as we expected it to be, but since the change in temperature our losses have decreased. We believe that a Live Stock Insurance Company can be successfully conducted with proper care in the selection and valuation of Risks.

The amount of business done by this Company since its inauguration is something marvelous. Issuing its first Policy on the twenty-sixth day of January, 1882; it has at this date Insurance in force covering a valuation of One-half Million Dollars.

No such success was ever before achieved by an Insurance Company in so short a space of time, and it certainly shows that the public must have confidence in its management.

LIST OF LOSSES PAID UP TO OCTOBER 15, 1882.

| OWNER. | RESIDENCE. | DIED. | LOSS PAID. | AMT. |
|---------------------------|---|-------------------|--------------------|----------|
| Chas. G. Blumhardt... | Wilkins Street, Baltimore. | February 17, 1882 | February 18, 1882. | \$188 00 |
| John Decker..... | 314 Columbia Av..... | March 27, " | March 27, " | 118 00 |
| J. Kraus..... | 39 Barre Street..... | April 20, " | April 20, " | 128 00 |
| Dr. J. H. Kelley..... | Locust Grove, Kent Co., Md..... | May 9, " | May 11, " | 90 00 |
| Frank Laure..... | 207 Aisquith Street, Baltimore. | June 5, " | June 7, " | 98 00 |
| Wm. J. Chapman..... | York and William Sts..... | June 8, " | June 14, " | 150 00 |
| H. C. Coburn..... | 2425 K St., S. W. Wash'n, D. C..... | June 9, " | June 15, " | 180 00 |
| Jas. Barnes..... | Woodlawn, Cecil Co., Md..... | June 10, " | July 10, " | 63 00 |
| John Kerns..... | 699 W. Fayette St..... Baltimore. | June 13, " | July 11, " | 78 00 |
| Chas. J. Linderman..... | 247 S. Broadway..... | June 27, " | July 13, " | 150 00 |
| George Schultz..... | Calverton & Balto. Sts..... | June 12, " | July 14, " | 75 00 |
| Wm. J. Schneider..... | 220 E. Capitol St., Wash'n, D. C..... | June 30, " | August 8, " | 120 00 |
| Smart & Little..... | 4 & 6 Hollingsworth St., Balto..... | August 18, " | August 29, " | 188 00 |
| Thos. Skinner..... | 3 Light Street..... Baltimore. | August 16, " | September 11, " | 88 00 |
| S. B. Sexton & Son..... | 115 W. Lombard St..... | July 16, " | September 16, " | 60 00 |
| M. Ottenheimer & Son..... | 333 Frederick Av..... | July 16, " | September 16, " | 180 00 |
| Wm. H. Kline..... | Orangeville, Md..... | July 24, " | September 20, " | 90 00 |
| Chas. F. Merrick..... | Clifton, Baltimore Co., Md..... | July 25, " | September 24, " | 100 00 |
| John Daly..... | 408 P. St., N. W. Wash'n, D. C..... | July 21, " | September 21, " | 135 00 |
| M. B. Phelps..... | Clarksville, Howard Co., Md..... | September 14, " | September 28, " | 225 00 |
| John Schone..... | Gardenville, Md..... | July 27, " | September 26, " | 120 00 |
| L. H. Gadd..... | Denton, Md..... | July 28, " | September 28, " | 225 00 |
| Chas. W. Brown..... | 87 Columbia Ave..... Baltimore. | August 1, " | October 1, " | 113 00 |
| Louisa Meister..... | Butcher Lane..... | August 3, " | October 3, " | 113 00 |
| Wm. R. Beatty..... | 247 Bank Street..... | August 4, " | October 4, " | 118 00 |
| John A. Leits..... | 60 S. Schroder St..... | August 5, " | October 5, " | 90 00 |
| Wm. L. Unger & Co..... | Druid Hill Ave. & Biddle St. Balto..... | August 7, " | October 7, " | 113 00 |
| James Moan..... | 288 Harford Ave..... | August 7, " | October 7, " | 225 00 |
| Thomas Stroh..... | 57 Patterson Ave..... | August 11, " | October 11, " | 188 00 |
| Brown & Graves..... | 34 South Street..... | August 14, " | October 14, " | 180 00 |
| Chas. A. Danning..... | Denton, Md..... | August 15, " | October 16, " | 128 00 |

TOTAL AMOUNT, - - - \$2,927 00

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ROBERT S. COASE, Pres't. WM. B. SANDS, Vice-Pres't. GEO. W. S. HOFFMAN, Treas'r.

DIRECTORS:

ROBERT S. COASE, of Clairmont Nurseries. GEO. W. S. HOFFMAN, of W. H. Hoffman & Sons, Paper Manufacturers. WM. B. SANDS, Editor of the American Farmer. ELI W. FREE, Secretary. JOSEPH W. HOFFMAN, of W. H. Hoffman & Sons.

High Bred Live Stock at Public Sale at POPLAR GROVE, THURSDAY, NOVEMBER 23, 1882.

THE OFFERINGS WILL BE

7 Yearling Colts by Willis' Hambletonian HOAXER, (thoroughbred,) and CONSTANTINE, (Percheron.)
1 Pair 4-year-olds, from Trotting Bred Mares, they are broke to harness and good under saddle—Sired by HANOVER, thoroughbred.

6 Work Mares, some of them bred to CYCLOPS.
REGISTERED SHORTHORNS.—The choicest ever offered in Maryland.
Head, consisting of young Bulls, Heifers and young Cows of the best blood and individual excellence.
Sired by Emory's Roan Duke, 32573; 2d Duke Woodford, 7528; Kirklevington Lad, 39426; 3d Imperial Red Rose, 35908, and other choice bulls of the following families: Fantic, Young Mary, Josephine, Harriott, Miss Wiley, Belia, Victoria and Mary Anne.

SEEP.—A choice lot of Bucks, (Yearlings and Lambs) Cotswold and Southdowns.
Parties wishing to attend Sale can leave Baltimore, Light Street Wharf, at 9 A. M., per Steamer George Law, for Poplar Grove, (passage \$1) on day previous or by morning train from Wilmington, Delaware, to Centreville on day of Sale. Carriage from Centreville to Sale.

TERMS.—All stock offered will be sold without reserve to the highest responsible bidder, for cash, or on a credit of nine months, purchaser giving approved note payable at the Centreville National Bank of Maryland. The sale can be conducted under cover and will go on, rain or shine.

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Has a Pad differing from all others, in cup shape, with Self-Adjusting Ballin center, adapts itself to all positions of the body, while the Ballin in the cup presses back the Intestines, and supports the weight with the Finger. With light pressure the Hernia is held securely in place, and a radical cure effected. It is easy, durable and cheap. Sent by mail. Circulars free.
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The New Improved
MONARCH LIGHTNING SAW
Is the cheapest and best. A boy sixteen years old can saw logs fast and easy. Send on test trial. Good circulars containing testimonials and full particulars. **AGENTS WANTED.**
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Use BEAN'S CONCENTRATED
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Nature's own Color. Brightest and Strongest. Buy of your Merchant, or send 25 cts. in stamps for a sample, enclosing 500 lbs. to
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Garmore's Artificial Ear Drum.
As invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. **CAUTION:** Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured.
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1. **The Indian Condition Powder.**—Unlike many powders now on the market, which act only as a stimulant, these powders, an entirely vegetable compound, possess the qualities of a tonic—invigorating and developing the natural powers of animals, and being a mild purgative, keep the system in a healthy condition, enabling the animal to do more work and to resist the approach of disease. To dairymen these powders are invaluable, largely increasing the yield of milk, enriching the cream and adding greatly to its butter-yielding properties. When used on dairy farms it has everywhere given most complete satisfaction.

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3. **The Retiker Chicken Food.**—For prevention and cure of all diseases incident to poultry yards. Poultry keepers find, after brief trial, a very large increase in the production of eggs, and marked improvement in the weight and appearance of fowls. As a promoter of growth in young fowls it has no equal, keeping them in health and free from vermin.

4. **The Shepherd's Lotion.**—A chemical preparation for prevention and cure of scab, rot, &c., in sheep and swine. This preparation needs only a trial to prove its worth.

One-pound boxes of the Condition Powders or Chicken Food, or a sample box of the Ointment, will be forwarded to any address, post paid, on receipt of 25 cts. in stamps or currency. Address for samples or circulars, The Retiker Manufacturing Co., 1704 Wylie Street, Philadelphia, Pa.

REGISTERED SHORTHORN BULL
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DUKE OF HAMILTON No. 33111, Vol. 19, A. F. H. B. A sure breeder, kind and gentle, will be sold low, as his owner has no further use for him.

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Cotswold Sheep for Sale.

40 RAM and EWE LAMS, sired by "Royal Shorthorn" and other fine rams; also, Yearling Rams and Ewes of all ages. Imported "Baron Thame" of 20½ lbs fleece at the head of my flock—whole flock as Yearlings average 12 to 20 lb. fleeces

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For Twenty Years Humphreys' Veterinary
Specifics have been used by Farmers, Stock-
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Managers with success.

LIST OF SPECIFICS.
A. A. Cures Fevers and Inflammation, Milk
Fever, Spinal Meningitis, Hog Cholera, 75c.
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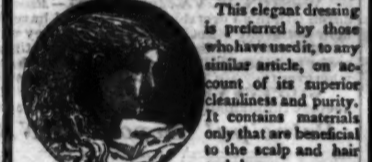
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This elegant dressing
is preferred by those
who have used it, to any
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count of its superior
cleanliness and purity.
It contains materials
only that are beneficial
to the scalp and hair
and always
Restores the Youthful Color to Gray or Faded Hair
Parker's Hair Balm is finely perfumed and is
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A Superlative Health and Strength Restorer.
If you are a mechanic or farmer, worn out with
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Tonic will cure you. It is the Greatest Blood Purifier
And the Best and Surest Cough Cure Ever Used.

If you are wasting away from age, dissipation or
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Ginger Tonic at once; it will invigorate and build
you up from the first dose but will never intoxicate.
It has saved hundreds of lives; it may save yours.
CAUTION!—Beware of all imitations. Parker's Ginger Tonic
is composed of the best remedial agents in the world, and is entirely
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GREAT SAVING BUYING DOLLAR SIZE.

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Its rich and lasting fragrance has made this
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is nothing like it. Insist upon having FLORES-
TON COLOGNE and look for signature of
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LARGE SAVING BUYING 75c. SIZE.

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Thoroughbred Yorkshires!
A BOAR AND FIVE SOWS, BERKSHIRE
and ESSIX Pigs Wanted.

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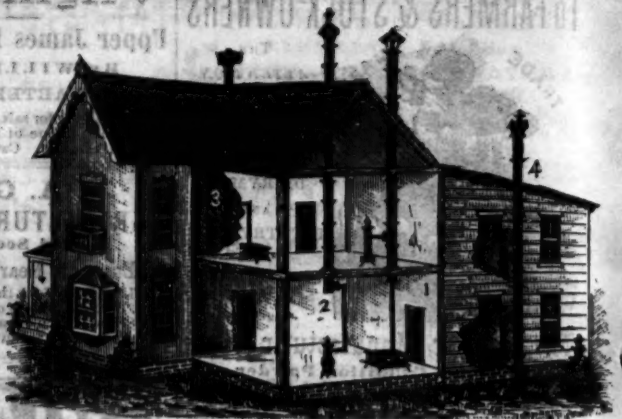
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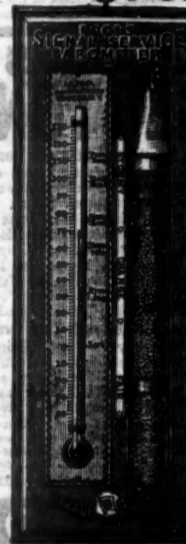
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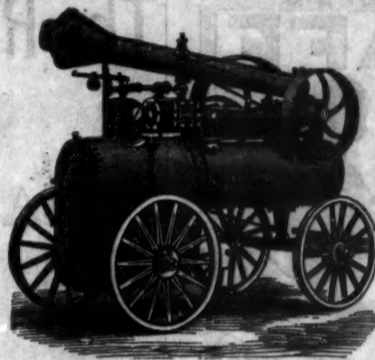
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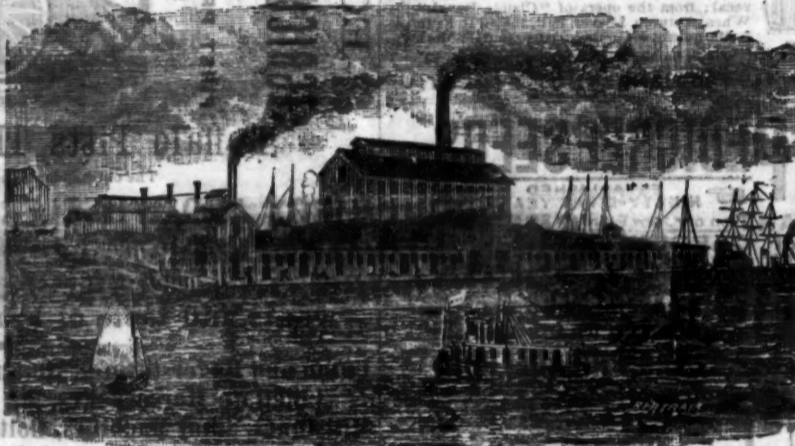
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